

CURRICULUM VITAE

Allen W. Cowley Jr PhD

**Chairman, Professor
Department of Physiology**

OFFICE ADDRESS:

Basic Science Building
8701 Watertown Plank Rd
Milwaukee, WI 53226

EDUCATION:

1961 - Present BA - Economics, Trinity College, Hartford, CT
1965 - Present MS - Physiology, Hahnemann Medical College, Philadelphia, PA
1968 - Present PhD - Physiology, Hahnemann Medical College, Philadelphia, PA
1969 - Present PhD, University of Mississippi, MS

FACULTY APPOINTMENTS:

1968 - 1969 Instructor , Physiology and Biophysics, University of Mississippi , MS
1969 - 1972 Assistant Professor , Physiology and Biophysics, University of Mississippi , MS
1971 Graduate School Faculty, Full Membership Appointment,
1973 - 1975 Associate Professor , Physiology and Biophysics ,
1974 - 1975 Visiting Professor , Physiology, Harvard Medical School, Harvard, CT
1974 Tenured , University of Mississippi Medical Center, MS
1975 - 1980 Professor , Physiology and Biophysics, University of Mississippi Medical Center, MS
1980 Professor and Chairman, Department of Physiology, Medical College of Wisconsin, Milwaukee, WI
1990 Adjunct Professor, Department of Biomedical Engineering, Marquette University, Milwaukee, WI
2008 Harry & Gertrude Hack Term Professor , Physiology, Marquette University, Milwaukee, WI
2009 James J. Smith & Catherine Welsch Smith Chair , Physiology,

ADMINISTRATIVE APPOINTMENTS:

1976 - 1980 Director , Department of Physiology and Biophysics, Graduate Studies, University of Mississippi
Medical Center, MS
1980 Chairman, Department of Physiology, Medical College of Wisconsin, Milwaukee, WI
1988 - 1990 Member, Board of Directors, Medical College of Wisconsin, Milwaukee, WI

AWARDS AND HONORS:

1973 - Present Established Investigatorship, American Heart Association
1975 - Present Alumnus of the Year Award, Hahnemann Medical College Graduate School
1993 - Present Distinguished Service Award, Medical College of Wisconsin
1996 - Present Distinguished Service Award , Medical College of Wisconsin
1996 - Present Honorary Member , Hungarian Physiological Society
1996 - Present Ernest H. Starling Distinguished Lectureship, American Physiological Society, Washington,
DC
1996 - Present Distinguished Achievement Award, Council for High Blood Pressure Research
1996 - Present MERIT Award, National Institute of Health
1996 - Present Distinguished Achievement Award , Scientific Councils of the American Heart Association

1997 - Present Honorary Member , Brazilian Academy of Science
1997 - Present Novartis Award , Council for High Blood Pressure Research, American Heart Association, Washington, DC
1997 - Present Guyton Distinguished Lectureship, University of Mississippi Medical Center
1997 - Present Wiggers Award , American Physiological Society, Cardiovascular Section
2000 - Present Doctor Honoris Causa, Semmelweis University of Medicine, Budapest, Hungary
2001 - Present Walter B. Cannon Distinguished Lectureship, American Physiological Society
2003 - Present Distinguished Scientist Award , American Heart Association
2006 - Present Ray G. Daggs Award, American Physiological Society
2009 - Present Causa Honoris, Warsaw University, Warsaw, Poland

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

American Physiological Society (Member)
American Society of Nephrology (Member)
Association of Chairs of Departments of Physiology (Member)
International Society of Hypertension (Member)
American Society of Hypertension (Member)
Sigma XI Society (Member)
Council on High Blood Pressure Research, American Heart Association (Member)
Inter-American Society of Hypertension (Member)
Council on Circulation, American Heart Association (Member)
Microcirculation Society (Member)

EDITORSHIPS/EDITORIAL BOARDS/JOURNAL REVIEWS:

Editorship

1981 - 1984 Hypertension, Annual Supplement of Proceedings of the Council for High Blood Pressure Research
1982 - 1984 Publications Committee of Council for High Blood Pressure Research, American Heart Association
1988 - 1991 News in Physiological Sciences
1998 - 2003 American Journal of Physiology, Physiological Genomics
1999 - 2004 American Journal of Physiology: Heart and Circulation
2001 - 2004 American Journal of Physiology: Regulatory, Integrative, Comparative
2003 - 2009 American Journal of Physiology, Physiological Genomics
2009 American Journal of Physiology, Physiological Genomics

Editorial Board

1976 International Review of Physiology. University Park Press
1977 Clinical and Experimental Hypertension
1979 - 1983 American Journal of Physiology, Circulation Section
1980 - 1991 Hypertension
1984 - 1988 American Journal of Physiology: Regulatory, Integrative and Comparative Physiology
1985 - 1999 International Journal of Cardiology
1987 - 1989 American Journal of Physiology: Heart and Circulatory Physiology
1993 Hypertension
1993 - 1996 Journal of Hypertension
1993 - 1996 Clinical and Experimental Pharmacology and Physiology
1997 News in Physiological Sciences
1997 American Journal of Physiology, Physiological Reviews

NATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

1972 Chairman, Medical Sciences Division, Mississippi Academy of Sciences
1974 - 1992 Member, Conduct 2-3 NIH site visits each year to review Program Project Grant Applications
1976 External Examiner, University of the West Indies
1976 Fellow, Council on High Blood Pressure Research, American Heart Association

1976 Fellow , Council on Circulation , American Heart Association
1976 Fellow , Cardiovascular Section , American Physiological Society
1976 Member, Medical Advisory Board of the Council for High Blood Pressure Research, American Heart Association
1976 - 1977 Member , Congressional Task Force on Hypertension, NIH
1977 - 1980 Member, Publications Committee of the Council for High Blood Pressure Research, American Heart Association
1978 - 1979 Member, NIH Study Section , Ad Hoc Cardiovascular and Renal Study Section
1979 Member, NIH Study Section , Ad Hoc RFA - Neurogenic Mechanisms in Hypertension
1979 - 1983 Member, NIH Study Section , Cardiovascular and Renal Study Section
1981 - 1984 Member, Executive Committee, Council for High Blood Pressure Research, American Heart Association
1981 - 1985 Member, Council for High Blood Pressure Research, Scientific Council Policy Group
1982 - 1984 Member, Program Committee, Council for High Blood Pressure Research
1982 - 1985 Member, Executive Committee of Council on Circulation, American Heart Association
1983 - 1986 Councilor, Water and Electrolyte Homeostasis Section , American Physiological Society
1983 - 1987 Member, Credentials Committee, Inter-American Society of Hypertension
1983 - 1986 Committee on Committees , American Physiological Society
1984 - 1986 Member, Cardiovascular Research Study Section , American Heart Association
1984 - 1985 Member, National Institutes of Health Parent Review Committee , Specialized Center of Research (SCOR) in Hypertension
1984 - 1985 Councilor, Association of Chairmen of Departments of Physiology
1985 - 1989 Chairman, Water and Electrolyte Homeostasis Section , American Physiological Society
1986 - 1988 Member, Nominating and Membership Committee, American Heart Association
1986 Pfizer Traveling Fellow , Clinical Research Institute of Montreal
1987 Organizer and Chairman , Second International Vasopressin Conference
1987 - 1991 Member, Arteriosclerosis, Hypertension and Lipid Metabolism Advisory Committee, National Institutes of Health
1987 - 1989 Secretary/Treasurer, Association of Chairmen of Departments of Physiology
1987 - 1993 President, Wisconsin Association for Biomedical Research and Education (WABRE)
1987 Member, Publications Committee, Inter-American Society of Hypertension
1988 - 1991 Chairman, Program Committee , Council for High Blood Pressure Research
1988 - 1993 Member, Council, American Physiological Society
1988 - 1990 Vice-Chairman, Council for High Blood Pressure Research, American Heart Association
1989 - 1991 Member, Long Range Planning Committee, Inter-American Society of Hypertension
1989 - 1990 Member, National Institutes of Health Parent Review Committee , Specialized Center of Research (SCOR) in Hypertension
1989 - 1993 Member, Board of Trustees, Inter-American Society of Hypertension
1989 - 1992 Chairman, Government Relations Initiative Programs Committee, American Physiological Society
1989 - 1990 Chairman , Ad Hoc Committee , Code of Ethics of American Physiology Society
1990 - 1992 Chairman, CIBA Award Selection Committee, Council for High Blood Pressure Research of the American Heart Association
1990 President, Association of Chairmen of Departments of Physiology
1990 Member, Task Force on Hypertension, National Heart, Lung, and Blood Institute (Basic Research Group)
1990 - 1992 Member, Executive Committee , International Society of Hypertension
1990 - 1992 Chairman , Council for High Blood Pressure Research , American Heart Association
1991 - 1993 Member, Credentials Committee, Inter-American Society of Hypertension
1991 Member, International Society of Hypertension Traveling Scholar to China, Malaysia and Thailand
1992 - 2000 Chairman, Planning Committee , International Society of Hypertension Meeting
1992 - 1997 CAS Representative, Association of Chairmen of Departments of Physiology
1992 - 1994 Chairman, Long Range Planning Committee, and Nominating & Membership Committee, Council for High Blood Pressure Research of the American Heart Association
1992 - 1993 Member, NSCORT Integrated Physiology Peer Review Panel to NASA
1993 - 1996 Member, NHLBI Research Review Committee A/B
1993 - 1996 APS Representative, Advisory Committee, FASEB Summer Research Conference

1993 Honorary Member, Milwaukee Academy of Medicine
 1994 - 1996 Member, Division Subcommittee, Life and Microgravity Sciences and Applications Advisory Committee, National Aeronautics and Space Administration
 1995 Member, Baxter Research Award Selection Committee, American Association of Medical Colleges
 1995 - 2001 Member, Intersocietal Affairs Committee, American Society of Hypertension
 1995 - 1996 Secretary, Cardiovascular Section, American Physiological Society
 1996 - 1999 Member, Board of Trustees, American Association for the Accreditation of Laboratory Animal Care
 1996 Member, Public Affairs Advisory Committee, American Physiological Society
 1997 - 1998 President, American Physiological Society
 1997 Organizer, Banbury Conference: Genomics to Physiology and Beyond: How do we get there?, American Physiological Society
 1998 - 2002 Member, Advisory Council, National Heart, Lung, and Blood
 1998 - 2001 Member, National Organizing Committee, International Union of Physiological Sciences
 1998 - 2001 Member, Scientific Program Committee, International Union of Physiological Sciences
 1998 - Present Chairman, Scientific Advisory Committee, TMJ Association
 1999 - 2002 Member, Scientific Program Committee
 1999 Member, Burroughs Wellcome Fund Program Advisory Committee
 2000 Council Member, International Congress of Pathophysiology
 2000 Member & Co-Chair, GPRA Assessment Working Group, NIH
 2000 Consultant, Medical College of Cornell University
 2000 Member, Integrative Animal and Human Physiology Panel
 2000 - 2002 Chairman, Long-Range Planning Committee, American Physiological Society
 2001 - 2005 President, International Union of Physiological Sciences
 2006 - 2009 Member, Long-Range Planning Committee
 2006 Member, Task Force on Meetings Committee
 2006 - 2008 Member, Novartis Award Selection Committee, Council for High Blood Pressure Research
 2006 - 2009 Chairman, Distinguished Scientists Selection Committee, American Heart Association
 2006 - 2009 Member, Advisory Committee, Natural Sciences Division at Carthage College
 2006 Member, Strategic Plan Committee, NHLBI
 2006 - 2010 Member, EURATools
 2006 - 2009 Member, International Advisory Board of Acta Physiologica Sinica
 2007 - Present Member, Board of External Experts, NHLBI
 2007 Member, Graduate Program Review, Case Western Reserve University
 2007 Member, Graduate Program Review, University of Cincinnati
 2008 Member, P01 SEP Review, NHLBI
 2008 Member, K99-R00 Review, NHLBI
 2008 Member, Spring Vascular Program Project Review, NHLBI
 2008 Member, IUPS Nominations Committee
 2008 - 2010 Member, Ray G. Daggs Award Committee
 2009 - 2010 Member, Director's New Innovator Awards Review, NIH
 2009 Member, Steering Committee, Interdisciplinary Functional Pain Consortium

RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:

Active

Peer Review

Title:	Mechanisms of Hypertension-induced Renal Injury
Role:	Principal Investigator
PI:	Self
Dates:	2006 - 2011
Direct Funds:	\$1,555,254

Title:	Genetic & Physiological Basis of Salt-induced Hypertension
Source:	National Institutes of Health
PI:	A.W. Cowley, Jr., Ph.D.; 25% effort

Dates: 2006 - 2011
Direct Funds: \$7,169,079

Title: Blood Pressure - Determinants and Controllers
Source: National Institutes of Health
PI: A.W. Cowley, Jr., Ph.D., 25% effort
Dates: 2008 - 2013
Direct Funds: \$4,850,000

Title: New Faculty Recruitment in Stem Cell and Regenerative Cardiovascular biology
Source: National Institutes
Role: Principal Investigator
PI: Self
Dates: 2009 - 2011
Direct Funds: \$888,648

Title: Mechanistic characterization of genes for hypertension and renal disease
Source: National Institutes of Health
Role: Co-investigator
Dates: 2009 - 2011
Direct Funds: \$2,148,588

Title: Clinical and Translational Science Award
Source: National Institutes
Dates: 2010 - 2015
Direct Funds: \$2,608,905

Prior

Peer Review

Title: Quantitative Analysis of the Renin-
Source: National Institutes of Health
Dates: 1971 - 1973
Direct Funds: \$75,000

Title: Renewal
Source: National Institutes of Health
Dates: 1975 - 1980
Direct Funds: \$200,000

Title: Cardiovascular Dynamics and their Control
Source: National Institutes of Health
Role: Co-Investigator
Dates: 1978 - 1983
Direct Funds: \$2,468,024

Title: Quantification of neurohumoral arterial pressure control
Source: National Institutes of Health
Dates: 1980 - 1983
Direct Funds: \$300,622

Title: Osmotic and Reflex Control of Vasopressin in Hypertension
Source: American Heart Association
Dates: 1982
Direct Funds: \$300,622

Title: Vasopressin in Essential Hypertension
Source: National Institutes of Health
Dates: 1982 - 1984
Direct Funds: \$205,253

Title: Blood Pressure - Determinants and Controllers
Source: National Institutes of Health
Role: Program Director - 55% effort
PI: Self
Dates: 1982 - 1984
Direct Funds: \$3,387,874

Title: Influence of Vasopressin on Cardiac and Vascular Factors
Source: American Heart Association/ Greene Fellowship
Dates: 1985
Direct Funds: \$15,996

Title: Central Actions of Vasopressin on Cardiovascular Control
Source: Thunhorst Fellowship
Dates: 1987 - 1989
Direct Funds: \$40,000

Title: Whole-Body Autoregulation in Conscious Areflexic Rats
Source: American Heart Association / Hinojosa-Laborde Fellowship
Dates: 1987
Direct Funds: \$15,996

Title: Blood Pressure - Determinants and Controllers
Source: National Institutes of Health
Role: A.W. Cowley, Jr., Ph.D., 55% effort
Dates: 1988 - 1993
Direct Funds: \$5,336,507

Title: Intrinsic Control of Venous Capacity: A Comparative Study
Source: National Science Foundation
Dates: 1989 - 1993
Direct Funds: \$44,472

Title: Renal Medullary Blood Flow and Blood Pressure Control
Source: National Institutes of Health / Mattson Fellowship
Dates: 1990 - 1992
Direct Funds: \$42,700

Title: Volume vs. Sodium in Salt-Sensitive Hypertension in Rats
Source: National Institutes of Health / Papanek Fellowship
Dates: 1990 - 1992
Direct Funds: \$49,600

Title: Physiology of Genetically Hypertensive Dog
Source: National Institutes of Health
PI: K. Bovee
Dates: 1991 - 1996
Direct Funds: \$382,700

Title: Blood Pressure - Determinants and Controllers
Source: National Institutes of Health
Role: A.W. Cowley, Jr., Ph.D., 45% effort

Dates: 1993 - 1998
Direct Funds: \$5,184,909

Title: Sympathetic/Vascular Cell Interactions in Hypertension
Source: National Institutes / Herzig Fellowship
Dates: 1993 - 1994
Direct Funds: \$51,300

Title: Renal V1 Vasopressin and Hypertension
Source: National Institutes
Dates: 1993 - 1995
Direct Funds: \$336,003

Title: Renal V1 Vasopressin and Hypertension
Source: National Institutes
Dates: 1996 - 2005
Direct Funds: \$1,568,637

Title: A Localization of Vasopressin Receptors and Regulation of Vascular Tone
Within the Renal Circulation
Source: American Heart Association
Dates: 1996 - 1997
Direct Funds: \$12,000

Title: SCOR - Genetics of Hypertension
Source: National Institutes
Role: Program Director
Dates: 1996 - 2001
Direct Funds: \$6,865,083

Title: Differential Regulation of Angiotensin II Receptor Subtypes as a
Consequence of Elevated Salt Intake
Source: American Heart Association
Dates: 1996 - 1997
Direct Funds: \$40,308

Title: Localization of Vasopressin Receptors and Regulation of Vascular Tone
Within the Renal Circulation
Source: American Heart Association
Dates: 1997 - 1998
Direct Funds: \$12,000

Title: Blood Pressure - Determinants and Controllers
Source: National Institutes
Role: Self
PI: A.W. Cowley, Jr., Ph.D., 30% effort
Dates: 1998 - 2003
Direct Funds: \$6,100,000

Title: The Role of Glomerular Sclerosis in the Development of Hypertension in
the Dahl Salt-Sensitive Rat
Source: American Heart Association / J. Dickhout Fellowship
Dates: 1999 - 2001
Direct Funds: \$60,000

Title: Hypertension Training Grant
Source: National Institutes of Health

Dates: 1999 - 2004
Direct Funds: \$1,010,630

Title: The Effect of Vasopressin on Blood Pressure and Renal Blood Flow Regulations in Dahl Salt-Sensitive Rats
Source: American Heart Association / B. Yuan Fellowship
Dates: 2000 - 2002
Direct Funds: \$60,000

Title: Program for Genomics Applications: Physiogenomics of Stressors in Derived Consomic Rats
Source: National Institutes
PI: H. Jacob
Dates: 2000 - 2004
Direct Funds: \$9,422,415

Title: SCOR-Molecular Genetics in Hypertension
Source: National Institutes
Dates: 2001 - 2006
Direct Funds: \$4,999,253

Title: Blood Pressure - Determinants and Controllers
Source: National Institutes
PI: A.W. Cowley, Jr., Ph.D., 25% effort
Dates: 2003 - 2008
Direct Funds: \$7,570,000

Title: Hypertension and Vascular Biology Training Grant
Source: National Institutes of Health
Dates: 2004 - 2009
Direct Funds: \$379,372

Title: Program for Genomics Applications: Knockout rats for Physiological Genomics
Source: National Institutes of Health
Dates: 2004 - 2008
Direct Funds: \$2,569,700

Title: Role of Reactive Oxygen Species in the Regulation of Renal Medullary Function and Blood Pressure
Source: American Heart Association / N. Taylor Fellowship
Dates: 2004 - 2005
Direct Funds: \$24,500

Title: The role of arterial pressure on pathways of oxidative stress in the renal outer medulla
Source: American Heart Association / A. Polichnowski Fellowship
Dates: 2006 - 2008
Direct Funds: \$52,000

Title: Effect of tissue O₂ on tubulo-vascular cross talk and renal medullary perfusion
Source: American Heart Association / P. O'Connor Fellowship
Dates: 2006 - 2008
Direct Funds: \$91,272

INVITED LECTURES/WORKSHOPS/PRESENTATIONS:

Local

1. Invited Speaker, Midwest Physiological Society, Madison, WI, 2001 - Present
2. Invited Speaker, Plastic Surgery Council, Milwaukee, WI, 2001 - Present
3. Invited Speaker, Grand Rounds, University of Wisconsin Medical School, Madison, WI, 2002 - Present

Regional

1. Invited Speaker, Michael J. Brody Symposium, Iowa City, IA, 1992 - Present
2. Invited Speaker, Hennepin Medical Center, Minneapolis, MN, 1994 - Present
3. Invited Speaker, Section of Nephrology, Department of Medicine, Chicago, IL, 1994 - Present
4. Invited Speaker, Department of Preventive Medicine, Rush-Presbyterian, Chicago, IL, 1994 - Present
5. Invited Speaker, Research Day, Cedar Rapids, IA, 1998 - Present
6. Invited Speaker, Genetics of Experimental and Human Hypertension Symposium, Toledo, OH, 2000 - Present
7. Invited Speaker, 5th Annual Meeting of Midwest Physiological Societies, Chicago, IL, 2000 - Present
8. Invited Speaker, 55th Annual Fall Conference & Scientific Sessions of the Council for High Blood Pressure Research, Genomics Workshop, Chicago, IL, 2001 - Present
9. Invited Speaker, Northwestern University Medical School, Chicago, IL, 2002 - Present
10. Invited Speaker, 10th Annual J. Hambleton Abraham Lecture, Kansas City, KS, 2003 - Present
11. Invited Speaker, Special Lecture Series, Cleveland, OH, 2005 - Present
12. Invited Speaker, University of Cincinnati, Cincinnati, OH, 2007 - Present
13. Invited Speaker, MISMA, East Lansing, MI, 2007 - Present

National

1. Invited Symposium Speaker, Guyton Memorial Symposium, FASEB, 1990 - Present
2. Invited Seminar, University of Maryland, 1990 - Present
3. Invited Symposium, National Geriatric Institute, Baltimore, MD, 1990 - Present
4. Invited Symposium Speaker, Herbert G. Langford Symposium, American Heart Association, Anaheim, CA, 1991 - Present
5. Seminar, University of Washington, 1991 - Present
6. Visiting Professor and Lecturer, Bowman Gray School of Medicine, Winston-Salem, NC, 1991 - Present
7. Invited Speaker, Hypertension Research Day, Memphis, TN, 1991 - Present
8. Invited Speaker, Inter-American Society of Hypertension, San Diego, CA, 1993 - Present
9. Invited Speaker, Center for Excellence of Hypertension Research, Bowman Gray School of Medicine, Winston-Salem, NC, 1993 - Present
10. Invited Speaker, American Physiological Society Intersociety Meeting, San Diego, CA, 1994 - Present
11. Invited Speaker, 50th Anniversary of the Instituto Nacional de Cardiologia "Ignacio Chavez" and of the Interamerican Society of Cardiology, Mexico City, Mexico, 1994 - Present
12. Invited Speaker, Conference on Dietary Sodium and Health, International Life Sciences Institute, Arlington, VA, 1994 - Present
13. Invited Speaker, Department of Physiology, Omaha, NE, 1994 - Present
14. Invited Speaker, American Society of Hypertension, New York, NY, 1994 - Present
15. Invited Lecturer, American Heart Association Council for High Blood Pressure Research Hypertension Summer School, Portsmouth, NH, 1995 - Present
16. Invited Speaker, FASEB Summer Research Conference, Saxtons River, VT, 1995 - Present
17. State-of-the-Art Lecture, Inter-American Society of Hypertension, Montreal, Quebec, Canada, 1995 - Present
18. Invited Speaker, Department of Pathology, University of Washington School of Medicine, Seattle, WA, 1995 - Present
19. Ernest H. Starling Distinguished Lectureship, Water and Electrolyte Homeostasis Section, American Physiological Society, Washington, DC, 1996 - Present
20. Invited Speaker, International Vascular Biology Meeting, Seattle, WA, 1996 - Present
21. Invited Speaker, Southern Society for Clinical Investigation, New Orleans, LA, 1997 - Present
22. Invited Speaker, Special Sesquicentennial Event in Honor of Franklin G. Knox, Honorary Doctorate Degree, University of Buffalo School of Medicine, 1997 - Present
23. Invited Speaker, Banbury Conference, Cold Spring Harbour, 1997 - Present
24. Invited Speaker, American Society of Hypertension, New York, NY, 1998 - Present

25. Invited Speaker, AAAS Annual Meeting & Science Innovation Exposition, Anaheim, CA, 1999 - Present
26. Invited Speaker, The Department of Veterans Affairs 1st Annual Hypertension Conference, Washington, DC, 1999 - Present
27. Invited Speaker and Visitor, Wake Forest University Baptist Medical Center, Winston-Salem, NC, 1999 - Present
28. Invited Speaker, 53rd Annual Fall Conference & Scientific Sessions of the Council for High Blood Pressure Research, Orlando, FL, 1999 - Present
29. Invited Speaker, Distinguished Scientist Seminar Series, Mobile, AL, 1999 - Present
30. Invited Speaker, Winter Biotechnology Conference at Cold Spring Harbor: Physiological Genomics & Rat Models, Cold Spring Harbor, NY, 1999 - Present
31. Invited Lecturer and Visitor, University of Massachusetts, Worcester, MA, 1999 - Present
32. Invited Speaker, Experimental Biology 1999, Washington, DC, 1999 - Present
33. Invited Speaker & Visitor, Louisiana State University, New Orleans, LA, 2000 - Present
34. Invited Speaker, Jackson Cardiovascular-Renal Meeting, Jackson, MS, 2000 - Present
35. Invited Speaker, 54th Annual Fall Conference & Scientific Sessions of the Council for High Blood Pressure Research, Washington, DC, 2000 - Present
36. Invited Speaker, Presidential Lecture, Dallas, TX, 2002 - Present
37. Invited Speaker, Thomas G. Muldoon Memorial Lectureship, Augusta, GA, 2002 - Present
38. Walter B. Cannon Distinguished Lectureship, American Physiological Society, New Orleans, LA, 2002 - Present
39. Invited Speaker, Life Sciences Research Office Conference and Workshop, Bethesda, MD, 2002 - Present
40. Invited Speaker, Biomedical engineering Society's 2003 Annual Fall Meeting, Nashville, TN, 2003 - Present
41. Invited Speaker for Workshop Tutorial, All PGA Scientific Meeting "From Genome to Disease: A symposium of high-throughput biology", Bethesda, MD, 2003 - Present
42. Invited Speaker, APS Conference "Understanding Renal and Cardiovascular Function through Physiologic Genomics", Augusta, GA, 2003 - Present
43. Invited Speaker, Inter-American Society of Hypertension Meeting, San Antonio, TX, 2003 - Present
44. Invited Speaker, Research Day 2004, Chapel Hill, NC, 2004 - Present
45. Invited Speaker, COBRE EAC, New Orleans, LA, 2005 - Present
46. IUPS President's Lecture, Experimental Biology, San Diego, CA, 2005 - Present
47. Leonard Share Distinguished Visiting Professorship Lecturer, Hypertension Research Day, Memphis, TN, 2005 - Present
48. Invited Speaker, Renal Week, American Society of Nephrology, Philadelphia, PA, 2005 - Present
49. Invited Speaker, Panel Discussion on Ethics and Physiology in the Era of the Human Genome, San Diego, CA, 2005 - Present
50. Invited Speaker, 1st Annual Summit on Systems Biology, Richmond VA, 2006 - Present
51. Invited Speaker, APS Conference, Ft. Lauderdale, FL, 2006 - Present
52. Invited Speaker, Nitric Oxide Society Meeting, Monterey, CA, 2006 - Present
53. NCN-PRISM Workshop, Santa Barbara, CA, 2007 - Present
54. Invited Speaker, NIDCR Workshop, Bethesda, MD, 2007 - Present
55. Keynote Speaker, Gold Spring Harbor Rat Genomics and Models Meeting, Cold Spring Harbor, NY, 2007 - Present
56. Invited Speaker, FASEB Summer Conference, Saxton's River, VT, 2007 - Present
57. Invited Speaker, American Society of Investigative Pathology Symposium, Experimental Biology, San Diego, CA, 2008 - Present
58. Invited Speaker, Cardiovascular Seminar, American Heart Association Scientific Sessions, New Orleans, LA, 2008 - Present
59. Invited Speaker, Jackson Cardiovascular-Renal Meeting, Jackson, MS, 2008 - Present
60. Invited Speaker, Morehouse CVRI Lecture Series, Morehouse School of Medicine, Atlanta, GA, 2008 - Present
61. Invited Speaker, FASEB Summer Conference, Saxton's River, VT, 2010 - Present

International

1. Invited Lecturer, Dr. Paul Korner's Farewell Symposium, Melbourne, Australia, 1990 - Present
2. Invited Teaching Faculty of International Society of Hypertension, Malaysia, Thailand, Hong Kong, 1990 - Present

3. Invited Lecturer, Japanese Congress of Applied Physiology, Morioka, Japan, 1991 - Present
4. State-of-the-Art Speaker, Inter-American Society of Hypertension, Rio de Janeiro, Brazil, 1991 - Present
5. Invited Lecturer, University of Heidelberg, 1991 - Present
6. Invited Speaker, International Society of Hypertension, Madrid, Spain, 1992 - Present
7. Invited Speaker, IV International Vasopressin Conference, Berlin, Germany, 1993 - Present
8. Invited Speaker, Fifth Annual Conference on the Pathophysiology of Hypertension, Sendai, Japan, 1994 - Present
9. Invited Lecturer, Volhard Lecture, International Society of Hypertension, Melbourne, Australia, 1994 - Present
10. Invited Speaker, International Union of Angiology, European Chapter's Congress, Budapest, Hungary, 1996 - Present
11. Invited Lecturer, New Perspectives in Microvascular Fluid Exchange: A Hundred Years After Starling, The Wellcome Trust, London, UK, 1996 - Present
12. Invited Speaker, 16th ISH Meeting, St. Petersburg, Russia, 1997 - Present
13. Invited Speaker, 9th International Symposium on SHR and Cardiovascular Genetics, Montreal, Quebec, Canada, 1997 - Present
14. Invited Speaker, 2nd Congress of Molecular Medicine, Berlin, Germany, 1998 - Present
15. Invited Speaker, 17th ISH meeting, Amsterdam, Netherlands, 1998 - Present
16. Invited Speaker, Satellite Meeting of the 17th ISH meeting, Prague, Czech Republic, 1998 - Present
17. Invited Speaker, Ontario Hypertension Society, Kingston, Ontario, Canada, 1998 - Present
18. Invited Speaker, Tigerstedt Centennial Lecture, III International Congress of Pathophysiology, Lahti, Finland, 1998 - Present
19. Keynote Lecturer, 1999 World Congress on Neurohypophysial Hormones, Edinburgh, Scotland, 1999 - Present
20. Invited Speaker, Second FEPS Congress, Prague, Czech Republic, 1999 - Present
21. Invited Speaker and Visitor, Brazilian Society of Hypertension, Belo Horizonte, Minas Gerais, Brazil, 1999 - Present
22. Invited Speaker, Consortium for Southeastern Hypertension Control's 6th National Scientific Sessions, San Juan, Puerto Rico, 1999 - Present
23. Invited Speaker, Honorary Doctorate, Budapest, Hungary, 2000 - Present
24. Invited Speaker & Visitor, Toho University, Tokyo, Japan, 2000 - Present
25. Invited Speaker, Kidney Heart Hypertension Post-Congressional Meeting Satellite Symposium, Fukuoka, Japan, 2000 - Present
26. Invited Speaker, Approaches to Integrative Physiology, London, England, 2000 - Present
27. Invited Speaker, Pfizer Meet-the-Specialist Conference, Tokyo, Japan, 2000 - Present
28. Invited Speaker & Visitor, 23rd Annual Scientific Meeting of the Japanese Society of Hypertension, Fukuoka, Japan, 2000 - Present
29. Invited Speaker, Presidential Lecture, Canadian Hypertension Society, 2001 - Present
30. Invited Speaker, Meeting Honoring Dr. Detlaf Ganton, Berlin, Germany, 2001 - Present
31. Invited Speaker, 1st Annual Bob Kline Lecture, London, Ontario, Canada, 2001 - Present
32. Invited Speaker, Joint German/Scandinavian Physiological Societies Meeting, Berlin, Germany, 2001 - Present
33. Invited Speaker, 19th Scientific Meeting of the International Society of Hypertension, Prague, Czech Republic, 2002 - Present
34. Invited Speaker, 4th International Congress of Pathophysiology, Budapest, Hungary, 2002 - Present
35. Invited Speaker, Hypertension Complications and Drug Response: The Genetic Issue-Alghero, Sardinia, Italy, 2003 - Present
36. Invited Speaker, ACTA Physiologica Scandinavica Symposium, Odense, Denmark, 2003 - Present
37. Invited Speaker, Federation of European Physiological Societies Congress, Nice, France, 2003 - Present
38. Invited Speaker, Macallum Lecture of the Department of Physiology, Toronto, Ontario, Canada, 2004 - Present
39. Invited Speaker, Frontiers in Heart Failure Research Distinguished Visitors Seminar Series, Ottawa, Canada, 2004 - Present
40. Invited Speaker, Angiotensin Conference, Tokyo, Japan, 2005 - Present
41. Invited Speaker, European Vascular Genomics Network, Hamburg, Germany, 2005 - Present
42. Invited Speaker, IAP Institute Workshop, Graz, Austria, 2006 - Present
43. Invited Speaker, 1st International Symposium on Hypertension, Osijek, Croatia, 2006 - Present

44. Invited Speaker, International Society of Nephrology, Hypertension and the Kidney Meeting, Vienna, Austria, 2007 - Present
45. Invited Speaker, Omics: Assembling Systems Biology Workshop, Ascona, Switzerland, 2007 - Present
46. Invited Speaker, University Health Research Day, Toronto, Canada, 2007 - Present
47. Invited Speaker, Shanghai Medical College at Fudan University, Shanghai, China, 2008 - Present
48. Session Chair, 13th International SHR Symposium , Prague, Czech Republic, 2008 - Present
49. Keynote Speaker, CVS Symposium Day, Edinburgh, Scotland, 2008 - Present
50. Invited Speaker, Beijing Joint Conference of Physiological Sciences, Beijing, China, 2008 - Present
51. Invited Speaker, Warsaw University, Warsaw, Poland, 2009 - Present
52. Invited Speaker, IUPS Symposium, Kyoto, Japan, 2009 - Present
53. Invited Speaker, 6th International Congress of Pathophysiology and the 14th International SHR Symposium, Montreal, Quebec, Canada, 2010 - Present
54. State-of-the-Art Speaker, ISH 21st Scientific Meeting, Fukuoka and Sendai, Japan

COMMITTEE SERVICE:

Medical College

- 1994 - Present Member, Institutional Strategic Plan Research Committee , Medical College of Wisconsin
- 1994 - Present Chairman , President's Search Committee for Dean, Medical College of Wisconsin
- 1994 - Present Member, Ad Hoc Committee , Review the Rank and Tenure Process, Medical College of Wisconsin
- 2007 - Present Member, Graduate Curriculum Strategic Planning Committee, Medical College of Wisconsin
- 2007 - Present Member, Scientific Advisory Board of the CTSA, Medical College of Wisconsin
- 2007 - Present Member, Internal Scientific Advisory Board for the Kidney Disease Center, Medical College of Wisconsin
- 2008 - Present Member, Search Committee , for Chairman of Obstetrics and Gynecology Department, Medical College of Wisconsin
- 2008 - Present Search Committee , Dean of the Graduate School, Medical College of Wisconsin
- 2008 - Present Chairman, Search Committee , for Director of Biomedical Resource Center, Medical College of Wisconsin
- 2008 - Present Member, Research Leadership Council, Medical College of Wisconsin
- 2009 - Present Member, Executive Committee of the Faculty, Medical College of Wisconsin
- 2009 - Present Member, Deans Advisory Committee, Medical College of Wisconsin
- 2009 - Present Member, BRC Advisory Committee, Medical College of Wisconsin
- 2009 - Present Member, Dean's Education Innovation Advisory Committee , Medical College of Wisconsin
- 2010 - Present Co-Chairman , Search Committee , Chairman of Medicine, Medical College of Wisconsin
- Member, Search Committee , for Chairman of Biochemistry Department, Medical College of Wisconsin
- Member, Strategic Research Planning Committee, Medical College of Wisconsin
- Member, Search Committee, for Graduate School Dean, Medical College of Wisconsin
- Member, Search Committee , for President, Medical College of Wisconsin
- Member, Executive Committee, Basic Science Chairmen, Medical College of Wisconsin
- Member, Search Committee , for Chairman of Pharmacology Department, Medical College of Wisconsin

MEDICAL COLLEGE TEACHING ACTIVITIES:

Continuing Medical Education

- 1980 - 1998 Organize and teach major portions of Graduate Course in Cardiovascular Physiology
- 1980 - 1981 Medical Physiology Course - taught Endocrine Section
- 1980 - 1996 Medical Physiology Course - Cardiovascular Section, give 12 to 18 formal lectures annually
- 2006 Physiological Genomics Course, Integration Block
- 2008 Medical Physiology Course, Cardiovascular Section
- 2008 Physiological Genomics Course, Integration Block
- 2009 Physiological Genomics Course, Integration Block
- 2009 Medical Physiology Course, Cardiovascular Section
- 2010 Physiological Genomics Course, Integration Block

EXTRAMURAL TEACHING (e.g. at Marquette, UWM, etc.):

Continuing Medical Education

2001 Medical College of Wisconsin , Medical Physiology Course, Cardiovascular Section
2003 - 2005 Medical College of Wisconsin , Medical Physiology Course, Cardiovascular Section
2005 Medical College of Wisconsin , Physiological Genomics Course, Integration Block
2006 Medical College of Wisconsin , Medical Physiology Course, Cardiovascular Section
2007 Medical College of Wisconsin , Physiological Genomics Course, Integration Block
2007 Medical College of Wisconsin , Medical Physiology Course, Cardiovascular Section

**EXTRAMURAL STUDENTS, FACULTY, RESIDENTS, AND CLINICAL/RESEARCH FELLOWS
MENTORED:**

Medical Students

Celso Maeda , 1995 - 1996
Fabiano de Medeiros, 1999 - 2000
Paulo Henrique Soares, 1999 - 2000

Graduate Students

PhD Students Advised

Edmond W. Quillen, 1976 - 1982
David Brown, 1977 - 1980
David C. Merrill , 1981 - 1985
John W. Osborn, Jr. , 1982 - 1986
Jose E. Krieger, M.D. , 1983 - 1987
Sharon Lu, M.D. , 1988 - 1993
Frank Park, 1993 - 1998
Norman Taylor , 2002 - 2006
Aaron Policknowski, M.S., 2004 - 2009
Feng Di , 2006

Postdoctoral Students

Thomas Lohmeier, Ph.D., 1970 - 1972
George Barnes, Ph.D. , 1973 - 1975
James DeClue, Ph.D., 1973 - 1975
Manis Smith, Jr., Ph.D., 1974 - 1976
Edmond W. Quillen, 1976 - 1982
Robert Fagard, Ph.D., 1976 - 1977
Gregory Hockel, Ph.D., 1977 - 1979
Katsuhiko Nakamura, M.D., 1983 - 1985
Randy Webb, Ph.D., 1983 - 1984
Jeffrey Schwartz, Ph.D., 1983 - 1984
Pepe Anderas, M.D., 1984 - 1985
Andrew S. Greene, Ph.D. , 1984 - 1986
Yuan Yu, M.D., 1985 - 1986
Carmen Hinojosa-Laborde, Ph.D., 1985 - 1988
Robert Thunhorst, Ph.D. , 1987 - 1989
Ludo J. Hellebrekers, DVM , 1988 - 1989
Paula E. Papanek, Ph.D. , 1989 - 1992
David L. Mattson, Ph.D. , 1990 - 1992
Konrad Stepniakowski, M.D. , 1991 - 1992
Kazushije Nakanishi, M.D., 1991 - 1993
Volkmar Gross, M.D., 1992 - 1994
Carla Ledderhos, M.D., 1992 - 1993
Kleber Franchini, M.D., Ph.D. , 1993 - 1995
Thomas Herzig, Ph.D., 1993 - 1995

Noriyuki Miyata, Ph.D. , 1995 - 1997
William G.Hope, M.D., Ph.D., 1995 - 1997
Matyas Szentiavanyi, Ph.D. , 1997 - 1999
Baozhi Yuan, Ph.D., 1998 - 2002
Jeffrey Dickhout, Ph.D., 1999 - 2002
Takefumi Mori, M.D., Ph.D., 2000 - 2003
Ayako Mikano, Ph.D., 2000 - 2002
Mingyu Liang, Ph.D., 2000 - 2002
Michiaki Abe, M.D., Ph.D., 2003 - 2005
Paul O'Connor, Ph.D, 2005 - 2008
Limin Lu, Ph.D. , 2006 - 2008
Carlos Schreck, M.D., 2006 - 2007
Chunhua Jin, Ph.D. , 2006 - 2011
Nadezda Zhelznova, Ph.D., 2009
Yosuki Ohsaki, Ph.D., 2009

BIBLIOGRAPHY

Refereed Journal Publications/Original Papers

1. Scott, J.C., and A.W. Cowley, Jr. The effect of diazoxide on coronary blood flow. *Am. J. Cardiol.* 24: 865-869, 1969.
2. Cowley, A.W. Jr., J.C. Scott, and J.J. Spitzer. Myocardial FFA metabolism during coronary infusion of norepinephrine in conscious dogs. *Am. J. Physiol.* 217: 511-517, 1969.
3. Cowley, A.W. Jr., and A.C. Guyton. Heart rate as a determinant of cardiac output in dogs with arteriovenous fistula. *Am. J. Cardiol.* 28: 321-325, 1971.
4. Cowley, A.W. Jr., J.P. Miller, and A.C. Guyton. Open-loop analysis of the renin-angiotensin system in the dog. *Circ. Res.* 28: 568-581, 1971.
5. Cowley, A.W. Jr., and A.C. Guyton. Quantification of intermediate steps in the renin-angiotensin-vasoconstrictor feedback loop in the dog. *Circ. Res.* 30: 557-566, 1972.
6. Guyton, A.C., T.G. Coleman, A.W. Cowley, Jr., K.W. Scheel, R.D. Manning, Jr., and R.A. Norman, Jr. Arterial pressure regulation: Overriding dominance of the kidneys in long-term regulation and in hypertension. *Am. J. Med.* 52: 584-594, 1972.
7. Guyton, A.C., T.G. Coleman, A.W. Cowley, Jr., J.F. Liard, R.A. Norman, Jr., and R.D. Manning, Jr. Systems analysis of arterial pressure regulation and hypertension. *Ann. Biomed. Eng.* 1: 254-281, 1972.
8. Guyton, A.C., T.G. Coleman, A.W. Cowley, Jr., J.F. Liard, R.D. Manning, Jr., and R.A. Norman, Jr. Role of renal salt and water clearance in renal hypertension. *Proc. 5th Int. Congr. Nephrol., Mexico, 1972, Vol. 3.* Edited by H. Villareal. Basel: Karger, 1974, pp. 74-80.
9. McCaa, R.E., C.S. McCaa, A.W. Cowley, Jr., C.E. Ott, and A.C. Guyton. Stimulation of aldosterone secretion by hemorrhage in dogs after nephrectomy and decapitation. *Circ. Res.* 32: 356-362, 1973.
10. Cowley, A.W. Jr., J.F. Liard, and A.C. Guyton. Role of the baroreceptor reflex in daily control of arterial blood pressure and other variables in dogs. *Circ. Res.* 32: 564-576, 1973.
11. McCaa, R.E., V.H. Read, A.W. Cowley, Jr., J.D. Bower, G.V. Smith, and C.S. McCaa. Influence of acute stimuli on plasma aldosterone concentration in nephric man and kidney allograft recipients. *Circ. Res.* 33: 313-322, 1973.
12. Guyton, A.C., A.W. Cowley, Jr., T.G. Coleman, J.F. Liard, R.E. McCaa, R.D. Manning, Jr., R.A. Norman, Jr., and D.B. Young. Pretubular versus tubular mechanisms of renal hypertension. In: *Mechanisms of Hypertension. Proceedings of an International Workshop Conference.* Edited by M.P. Sambhi. Amsterdam, Excerpta Medica, pp. 15-29, 1973.
13. Cowley, A.W. Jr., E. Monos, and A.C. Guyton. Interaction of vasopressin and the baroreceptor reflex system in the regulation of arterial blood pressure in the dog. *Circ. Res.* 34: 505-514, 1974.
14. Liard, J.F., A.W. Cowley, Jr., R.E. McCaa, C.S. McCaa, and A.C. Guyton. Renin, aldosterone, body fluid volumes, and the baroreceptor reflex in the development and reversal of Goldblatt hypertension in conscious dogs. *Circ. Res.* 34: 549-560, 1974.
15. Guyton, A.C., T.G. Coleman, A.W. Cowley, Jr., R.D. Manning, Jr., R.A. Norman, Jr., and J.D. Ferguson. A systems analysis approach to understanding long-range arterial blood pressure control and hypertension. *Circ. Res.* 35: 159-176, 1974.

16. Guyton, A.C., A.W. Cowley, Jr., T.G. Coleman, J.W. DeClue, R.A. Norman, Jr., and R.D. Manning, Jr. Hypertension: a disease of abnormal circulatory control. *Chest* 65: 328-338, 1974.
17. Guyton, A.C., A.W. Cowley, Jr., R. Fagard, H.G. Langford, R.E. McCaa, J.W. DeClue, T.G. Coleman, and G.E. Barnes. Dynamic functions of angiotensin in hypertension: Renal effects as the basic cause of chronic hypertension. *Acta Physiol. Latinoam.* 24: 592-595, 1974.
18. Manning, R.D. Jr., A.C. Guyton, T.G. Coleman, A.W. Cowley, Jr., W.A. Dobbs, Jr., J.W. DeClue, and R.A. Norman, Jr. Physiologic sensors in automatic control. Arterial pressure control mechanisms involved in short-term and long-term autoregulation. *Automedica* 1: 217-222, 1975.
19. Coleman, T.G., A.W. Cowley, Jr., and A.C. Guyton. Angiotensin and the hemodynamics of chronic salt depletion. *Am. J. Physiol.* 229: 167-171, 1975.
20. Cowley, A.W. Jr., and A.C. Guyton. Baroreceptor reflex effects on transient and steady-state hemodynamics of salt-loading hypertension in dogs. *Circ. Res.* 36: 536-546, 1975.
21. Brough RB Jr, Cowley AW Jr, Guyton AC. Quantitative analysis of the acute response to haemorrhage of the renin-angiotensin-vasoconstrictor feedback loop in areflexic dogs. *Cardiovasc Res.* 9(6): 722-33, 1975.
22. Guyton AC, Cowley AW Jr, Young DB, Coleman TG, Hall JE, DeClue JW. Integration and control of circulatory function. *Int Rev Physiol.* 9: 341-85, 1976. Review.
23. Fagard, R.H., A.W. Cowley, Jr., L.G. Navar, H.G. Langford, and A.C. Guyton. Renal responses to slight elevations of renal arterial plasma angiotensin II concentration in dogs. *Clin. Exp. Pharmacol. Physiol.* 3: 531-538, 1976.
24. Cowley, A.W. Jr., and J.W. DeClue. Quantification of baroreceptor influence on arterial pressure changes seen in primary angiotensin-induced hypertension in dogs. *Circ. Res.* 39: 779-787, 1976.
25. Cowley, A.W. Jr., and R.E. McCaa. Acute and chronic dose-response relationships for angiotensin, aldosterone, and arterial pressure at varying levels of sodium intake. *Circ. Res.* 39: 788-797, 1976.
26. Guyton, A.C., A.W. Cowley, Jr., D.B. Young, J.W. DeClue, R.D. Manning, Jr., R. Fagard, R.E. McCaa, and N.C. Trippodo. Synthesis of endocrine control in hypertension. *Clin. Sci. Mol. Med.* 51: 319s-320s, 1976.
27. Hall, J.E., A.C. Guyton, and A.W. Cowley, Jr. Dissociation of renal blood flow and filtration rate autoregulation by renin depletion. *Am. J. Physiol.* 232 (Renal Fluid Electrolyte Physiol. 1): F215-F221, 1977.
28. Hall, J.E., A.C. Guyton, N.C. Trippodo, T.E. Lohmeier, R.E. McCaa, and A.W. Cowley, Jr. Intrarenal control of electrolyte excretion by angiotensin II. *Am. J. Physiol.* 232 (Renal Fluid Electrolyte Physiol. 1): F538-F544, 1977.
29. Trippodo, N.C., T.G. Coleman, A.W. Cowley, Jr., and A.C. Guyton. Angiotensin II antagonists in dehydrated rabbits without baroreceptor reflexes. *Am. J. Physiol.* 232 (Heart Circ. Physiol. 1): H110-H113, 1977.
30. Coleman, T.G., A.C. Guyton, A.W. Cowley, Jr., J.D. Bower, R.A. Norman, Jr., and R.D. Manning, Jr. Feedback mechanism of arterial pressure control. *Contr. Nephrol.* 8: 5-12, 1977.
31. Lohmeier, T.E., A.W. Cowley, Jr., N.C. Trippodo, J.E. Hall, and A.C. Guyton. Effects of endogenous angiotensin II on renal sodium excretion and renal hemodynamics. *Am. J. Physiol.* 233 (Renal Fluid Electrolyte Physiol. 2): F388-F395, 1977.
32. Cowley AW Jr. Perspective on the physiology of hypertension. *Cardiovasc Clin.* 9(1): 1-22, 1978. Review.
33. Cowley, A.W. Jr., and T.E. Lohmeier. The relationship between body fluid volume, sodium ion concentration, and sensitivity to pressor effect of angiotensin II in dogs. *Circ. Res.* 42: 503-511, 1978.
34. DeClue, J.W., A.C. Guyton, A.W. Cowley, Jr., T.G. Coleman, R.A. Norman, Jr., and R.E. McCaa. Subpressor angiotensin infusion, renal sodium handling and salt-induced hypertension in the dog. *Circ. Res.* 43: 503-512, 1978.
35. Lohmeier, T.E., A.W. Cowley, Jr., J.W. DeClue, and A.C. Guyton. Failure of chronic aldosterone infusion to increase arterial pressure in dogs with angiotensin-induced hypertension. *Circ. Res.* 43: 381-390, 1978.
36. Guyton, A.C., A.W. Cowley, Jr., T.G. Coleman, R.E. McCaa, D.B. Young, and J.E. Hall. Basic physiological control of blood pressure. *Tribuna Medical Ano VI.* No. 38, pp. 3-11, 1978.
37. Lohmeier, T.E., and A.W. Cowley, Jr. Hypertensive and renal effects of chronic low level intrarenal angiotensin infusion in the dog. *Circ. Res.* 44: 154-160, 1979.
38. Hockel GM, Cowley AW Jr. Prostaglandin E2-induced hypertension in conscious dogs. *Am J Physiol.* 237(4): H449-54, 1979.
39. Cowley, A.W. Jr., and T.E. Lohmeier. Changes in renal vascular sensitivity and arterial pressure associated with sodium intake during long-term intrarenal norepinephrine infusion in dogs. *Hypertension* 1: 549-558, 1979.

40. Roman, R.J., A.W. Cowley, Jr., and C. Lechene. Water diuretic and natriuretic effect of clonidine in the rat. *J. Pharmacol. Exp. Ther.* 211: 385-393, 1979.
41. Smith, M.J. Jr., A.W. Cowley, Jr., A.C. Guyton, and R.D. Manning, Jr. Acute and chronic effects of vasopressin on blood pressure, electrolytes, and fluid volumes. *Am. J. Physiol.* 237 (Renal Fluid Electrolyte Physiol. 6): F232-F240, 1979.
42. Cowley, A.W. Jr. The concept of autoregulation of total blood flow and its role in hypertension. *Am. J. Med.* 68: 906-916, 1980.
43. Hockel, G.M., and A.W. Cowley, Jr. Role of the renin-angiotensin system in prostaglandin E2-induced hypertension. *Hypertension* 2: 529-537, 1980.
44. Cowley, A.W. Jr., S.J. Switzer, and M.M. Guinn. Evidence and quantification of the vasopressin arterial pressure control system in the dog. *Circ. Res.* 56: 58-67, 1980.
45. Overbeck, H.W., R.M. Berne, S. Chien, A.W. Cowley, Jr., F.J. Haddy, D.D. Heistad, C.R. Honig, W. Kirkendall, C.E. Rapela, R. Wells, F.M. Abboud, M.D. Lindheimer, and T. Yipinstoi. Report of the Hypertension Task Force of the National Heart, Lung, and Blood Institute. *Hypertension* 2: 342-369, 1980.
46. Barber, B.J., E.W. Quillen, Jr., and A.W. Cowley, Jr. An inexpensive pressure telemetry system. *Am. J. Physiol.* 239 (Heart Circ. Physiol. 8): H570-H572, 1980.
47. Hockel, G.M. and A.W. Cowley, Jr. Effect of chronic intrarenal prostaglandin E2 infusion and angiotensin II blockade on arterial pressure in the dog. *Advances in Prostaglandin and Thromboxane Research* 7: 1061-1065, 1980. Edited by B. Samuelsson, P.W. Ramwell and R. Paoletti. New York, Raven Press.
48. Cowley, A.W. Jr., W.C. Cushman, E.W. Quillen, Jr., M.M. Skelton, and H.G. Langford. Vasopressin elevation in essential hypertension and increased responsiveness to sodium intake. *Hypertension* 3 (Suppl. I): I93-I100, 1981.
49. Cowley, A.W. Jr., S.J. Switzer, and M.M. Skelton. Vasopressin, fluid, and electrolyte response to chronic angiotensin II infusion. *Am. J. Physiol.* 240 (Reg. Integ. Comp. Physiol. 9): R130-R138, 1981.
50. Cowley, A.W. Jr. Comment: Baroreceptor Denervation Hypertension? *Circ. Res.* 48: 587-589, 1981.
51. Lohmeier TE, Smith MJ Jr, Cowley AW Jr, Manning RD Jr, Guyton AC. Is vasopressin an important hypertensive hormone? *Hypertension.* 2(4) 416-25, 1981.
52. Goldsmith, S.R., G.S. Francis, A.W. Cowley, Jr., and J.N. Cohn. Response of vasopressin and norepinephrine to lower body negative pressure in humans. *Am. J. Physiol.* 243 (Heart Circ. Physiol. 12): H970-H973, 1982.
53. Quillen, E.W. Jr., and A.W. Cowley, Jr. Influence of volume changes on osmolality-vasopressin relationship in conscious dogs. *Am. J. Physiol.* 244 (Heart Circ. Physiol. 13): H73-H79, 1983.
54. Cowley AW Jr, Barber BJ. Vasopressin vascular and reflex effects - a theoretical analysis. *Prog Brain Res.* 60: 415-24, 1983.
55. Goldsmith, S.R., G.S. Francis, A.W. Cowley, Jr., T.B. Levine, and J.N. Cohn. Increased plasma arginine vasopressin levels in patients with congestive heart failure. *J. Am. Coll. Cardiol.* 1: 1385-1390, 1983.
56. Goldsmith, S.R., G.S. Francis, A.W. Cowley, Jr., T.B. Levine, and J.N. Cohn. Impaired response of plasma vasopressin to orthostatic stress in patients with congestive heart failure. *J. Am. Coll. Cardiol.* 2: 1080-1083, 1983.
57. Cowley, A.W. Jr., and R.J. Roman. Renal dysfunction in essential hypertension - Implications of experimental studies. *Am. J. Nephrol.* 3: 59-72, 1983.
58. Cowley, A.W. Jr., M.M. Skelton, D.C. Merrill, E.W. Quillen, Jr., and S.J. Switzer. Influence of daily sodium intake on vasopressin secretion and drinking in dogs. *Am. J. Physiol.* 245 (Reg. Integ. Comp. Physiol. 14): R860-R872, 1983.
59. Cowley, A.W. Jr., E.W. Quillen, Jr., and M.M. Skelton. Role of vasopressin in cardiovascular regulation. *Barger Symposium. Fed. Proc.* 42(15): 3170-3176, 1983.
60. Cowley, A.W. Jr., D.C. Merrill, J. Osborn, and B.J. Barber. Influence of vasopressin and angiotensin on baroreflexes in the dog. *Circ. Res.* 54: 163-172, 1984.
61. Cowley, A.W. Jr. Neuroendocrine, vascular and renal elements of hypertension. *Hypertension* 6 (Suppl. I): iii, March-April, 1984.
62. Quillen, E.W. Jr., M.M. Skelton, J. Rubin, and A.W. Cowley, Jr. Osmotic control of vasopressin with chronically altered volume states in anephric dogs. *Am. J. Physiol.* 247 (Endocrinol. Metab. 10): E355-E361, 1984.
63. Cowley, A.W. Jr., D.C. Merrill, E.W. Quillen, Jr., and M.M. Skelton. Long-term blood pressure and metabolic effects of vasopressin with servocontrolled fluid volume. *Am. J. Physiol.* 247 (Reg. Integ. Comp. Physiol. 16): R537-R545, 1984.

64. Cowley, A.W. Jr., M.M. Skelton, and D.C. Merrill. Long-term influence of vasopressin on the control of arterial blood pressure independent of volume changes. *J. Hypertens.* 2 (Suppl. 3): 337-339, 1984.
65. Goldsmith, S.R., A.W. Cowley, Jr., G.S. Francis, and J.N. Cohn. Effect of increased intracardiac and arterial pressure on plasma vasopressin in humans. *Am. J. Physiol.* 246 (Heart Circ. Physiol. 15): H647-H651, 1984.
66. Cowley, A.W. Jr. Assessment of the contributions of autoregulatory mechanisms to the antihypertensive actions of beta-adrenergic therapy. *Hypertension* 6: 137-139, 1984.
67. Roman, R.J., and A.W. Cowley, Jr. Characterization of a new model for the study of pressure-natriuresis in the rat. *Am. J. Physiol.* 248 (Renal Fluid Electrolyte Physiol. 17): F190-F198, 1985.
68. Roman, R.J., and A.W. Cowley, Jr. Abnormal pressure-diuresis-natriuresis response in spontaneously hypertensive rats. *Am. J. Physiol.* 248 (Renal Fluid Electrolyte Physiol. 17): F199-F205, 1985.
69. Goldsmith, S.R., A.W. Cowley, Jr., G.S. Francis, and J.N. Cohn. Reflex control of osmotically stimulated vasopressin in normal humans. *Am. J. Physiol.* 248 (Reg. Integ. Comp. Physiol. 17): R660-R663, 1985.
70. Manning, R.D. Jr., A.W. Cowley, Jr., and T.G. Coleman. Effects of baroreceptor denervation on volume loading hypertension in anephric dogs. *Hypertension* 7: 562-568, 1985.
71. Cowley, A.W. Jr., M.M. Skelton, and M.T. Velasquez. Sex differences in the endocrine predictors of essential hypertension - Vasopressin versus renin. *Hypertension* 7 (Suppl. D): I151-I160, 1985.
72. Schwartz, J., J.F. Liard, C. Ott, and A.W. Cowley, Jr. Hemodynamic effects of neurohypophyseal peptides with antidiuretic activity in dogs. *Am. J. Physiol.* 249 (Heart Circ. Physiol. 18): H1001-H1008, 1985.
73. Raff, H., D. Merrill, M.M. Skelton, and A.W. Cowley, Jr. Control of ACTH and vasopressin in neurohypophysectomized conscious dogs. *Am. J. Physiol.* 249 (Reg. Integ. Comp. Physiol. 18): R281-R284, 1985.
74. Ebert, T.J., A.W. Cowley, Jr., and M.M. Skelton. Vasopressin reduces cardiac function and augments cardiopulmonary baroreflex resistance increases in man. *J. Clin. Invest.* 77: 1136-1142, 1986.
75. Cowley, A.W. Jr., W.J. Barber, J.H. Lombard, J.L. Osborn, and J.F. Liard. Relationship between body fluid volumes and arterial pressure. *Fed. Proc.* 45: 2864-2870, 1986.
76. Cowley, A.W. Jr., M.M. Skelton, and D.C. Merrill. Are hypertensive effects of aldosterone, angiotensin, vasopressin, and norepinephrine chronically additive? *Hypertension* 8: 332-343, 1986.
77. Merrill, D.C., and A.W. Cowley, Jr. Chronic effects of vasopressin on plasma renin activity in sodium restricted dogs. *Am. J. Physiol.* 250 (Renal Fluid Electrolyte Physiol. 19): F460-F469, 1986.
78. Merrill, D.C., M.M. Skelton, and A.W. Cowley, Jr. Humoral control of water and electrolyte excretion during water restriction. *Kidney Int.* 29: 1152-1161, 1986.
79. Morita, H., W.T. Manders, M.M. Skelton, A.W. Cowley, Jr., and S.F. Vatner. Vagal regulation of arginine vasopressin in conscious dogs. *Am. J. Physiol.* 251 (Heart Circ. Physiol. 20): H19-H23, 1986.
80. Osborn, J.W. Jr., B.J. Barber, E.W. Quillen, Jr., R.J. Abram, and A.W. Cowley, Jr. Chronic measurement of cardiac output in unanesthetized rats using miniature, implanted thermocouples. *Am. J. Physiol.* 251 (Heart Circ. Physiol. 20): H1365-H1372, 1986.
81. Webb, R.L., J.W. Osborn, Jr., and A.W. Cowley, Jr. Cardiovascular actions of vasopressin: Baroreflex modulation in the conscious rat. *Am. J. Physiol.* 251 (Heart Circ. Physiol. 20): H1244-H1251, 1986.
82. Cowley, A.W. Jr., D.C. Merrill, M.M. Skelton, and M.J. Smith, Jr. Vasopressin excess: relative contribution of volume retention vs. direct actions on renin secretion and Na excretion. *J. Cardiovasc. Pharmacol.* 8 (Suppl. 7): S66-S69, 1986.
83. Goldsmith, S.R., G.S. Francis, and A.W. Cowley, Jr. Arginine vasopressin and the renal response to water loading in congestive heart failure. *Am. J. Cardiol.* 58: 295-299, 1986.
84. Cowley, A.W. Jr., M.M. Skelton, and D.C. Merrill. Osmoregulation during high salt intake: Relative importance of drinking and vasopressin secretion. *Am. J. Physiol.* 251 (Reg. Integ. Comp. Physiol. 20): R878-R886, 1986.
85. Farrell, P.A., A.B. Gustafson, T.L. Garthwaite, R.K. Kalkhoff, A.W. Cowley, Jr., and W.P. Morgan. Influence of endogenous opioids on the response of selected hormones to exercise in man. *J. Appl. Physiol.* 61: 1051-1057, 1986.
86. Goldsmith, S.R., G.S. Francis, A.W. Cowley, Jr., I.F. Goldenberg, and J.N. Cohn. Hemodynamic effects of infused arginine vasopressin in congestive heart failure. *J. Am. Coll. Cardiol.* 8: 779-783, 1986.
87. Raff, H., M.M. Skelton, D.C. Merrill, and A.W. Cowley, Jr. Vasopressin responses to corticotropin-releasing factor and hyperosmolality in conscious dogs. *Am. J. Physiol.* 251 (Reg. Integ. Comp. Physiol. 20): R1235-R1239, 1986.
88. Kay, J., D.T. Minkel, A.B. Gustafson, M.M. Skelton, A.W. Cowley, Jr., and S.D. Wilson. Elevated plasma

- vasopressin (AVP) levels during resection of pheochromocytomas. *Surgery* 100: 1150-1153, 1986.
89. Merrill, D.C., and A.W. Cowley, Jr. Chronic effects of vasopressin on fluid volume distribution in conscious dogs. *Am. J. Physiol.* 252 (Renal Fluid Electrolyte Physiol. 21): F26-F31, 1987.
 90. Goldsmith, S.R., D. Dodge, and A.W. Cowley, Jr. Nonosmotic influences on the osmotic stimulation of vasopressin in humans. *Am. J. Physiol.* 252 (Heart Circ. Physiol. 21): H85-H88, 1987.
 91. Osborn, J.W. Jr., M.M. Skelton, and A.W. Cowley, Jr. Hemodynamic effects of vasopressin compared with angiotensin II in conscious rats. *Am. J. Physiol.* 252 (Heart Circ. Physiol. 21): H628-H637, 1987.
 92. Takezawa, K., A.W. Cowley, Jr., M.M. Skelton, and R.J. Roman. Atriopeptin III alters renal medullary hemodynamics and the pressure diuresis response in rats. *Am. J. Physiol.* 252 (Renal Fluid Electrolyte Physiol. 21): F992-F1002, 1987.
 93. Velasquez, M.T., J.E. Menitove, M.M. Skelton, and A.W. Cowley, Jr. Hormonal responses and blood pressure maintenance in normal and hypertensive subjects during acute blood loss. *Hypertension* 9: 423-428, 1987.
 94. Osborn, J.W. Jr., 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 (Renal Fluid Electrolyte Physiol. 21): H675-H680, 1987.
 95. Velasquez, M.T., M.M. Skelton, and A.W. Cowley, Jr. Water loading and restriction in essential hypertension. *Hypertension* 9: 407-414, 1987.
 96. Nakamura, K., J.W. Osborn, Jr., and A.W. Cowley, Jr. Pressor response to small elevations of cerebroventricular pressure in conscious rats. *Hypertension* 10: 635-641, 1987.
 97. Merrill, D.C., M.M. Skelton, and A.W. Cowley, Jr. Angiotensin II sensitization of aldosterone responsiveness to plasma sodium in conscious dogs. *Am. J. Physiol.* 253 (Reg. Integ. Comp. Physiol. 22): R832-R837, 1987.
 98. Cowley, A.W. Jr. Vasopressin and Blood Pressure Regulation. *Clin. Physiol. Biochem.* 6: 150-162, 1988.
 99. Cowley, A.W. Jr., and J. Brennan. Association of Chairmen of Departments of Physiology Annual Questionnaire Results. *The Physiologist* 31(2): 27-33, 1988.
 100. Cowley, A.W. Jr., and J.F. Liard. Vasopressin and arterial pressure regulation. State of the Art Lecture. *Hypertension* (Suppl. 1): I25-I32, 1988.
 101. Hinojosa-Laborde, C., A.S. Greene, and A.W. Cowley, Jr. Autoregulation of the systemic circulation in conscious rats. *Hypertension* 11: 685-691, 1988.
 102. Ebert, T.J., and A.W. Cowley, Jr. Atrial natriuretic factor attenuates carotid baroreflex-mediated cardioacceleration in humans. *Am. J. Physiol.* 254 (Reg. Integ. Comp. Physiol. 23): R590-R594, 1988.
 103. Cowley, A.W. Jr., P.R. Anderas, and M.M. Skelton. Acute saline loading in normal and bilaterally atrial-resected conscious dogs. *Am. J. Physiol.* 255 (Heart Circ. Physiol. 24): H144-H152, 1988.
 104. Ebert, T.J., M.M. Skelton, and A.W. Cowley, Jr. Dynamic cardiovascular responses to infusions of atrial natriuretic factor in humans. *Hypertension* 11: 537-544, 1988.
 105. Cowley, A.W. Jr., D.C. Merrill, M.J. Smith, Jr., and M.M. Skelton. Role of vasopressin in regulation of sodium excretion. *Am. J. Med. Sci.* 31(4): 308-313, 1988.
 106. Roman, R.J., J.H. Lombard, A.W. Cowley, Jr., and J. Garcia-Estan. Pressure-diuresis in volume-expanded rats: cortical and medullary hemodynamics. *Hypertension* 12: 168-176, 1988.
 107. Raff, H., D.C. Merrill, M.M. Skelton, M.S. Brownfield, and A.W. Cowley, Jr. Control of adrenocorticotropin secretion and adrenocortical sensitivity in neurohypophysectomized conscious dogs: effect of acute and chronic vasopressin replacement. *Endocrinology* 122: 1410-1418, 1988.
 108. Monos, E., S.J. Contney, A.W. Cowley, Jr., and W.J. Stekiel. Effect of long term tilt on mechanical and electrical properties of rat saphenous veins. *Am. J. Physiol.* 256 (Heart Circ. Physiol. 25): H1185-H1191, 1989.
 109. Monos, E., S.J. Contney, A.W. Cowley, Jr., and W.J. Stekiel. Electrical and mechanical responses of rat saphenous vein to short term pressure load. *Am. J. Physiol.* (Heart Circ. Physiol. 25): H47-H55, 1989.
 110. Greene, A.S., P.J. Tonellato, J. Lui, J.H. Lombard, and A.W. Cowley, Jr. Microvascular rarefaction and tissue vascular resistance in hypertension. *Am. J. Physiol.* (Heart Circ. Physiol. 25): H126-H131, 1989.
 111. Nakamura, K., and A.W. Cowley, Jr. Sequential changes of cerebrospinal fluid sodium during the development of hypertension in Dahl rats. *Hypertension* 13: 243-249, 1989.
 112. Lombard, J.H., C. Hinojosa Laborde, and A.W. Cowley, Jr. Hemodynamics and microcirculatory alterations in reduced renal mass hypertension. *Hypertension* 13: 128-138, 1989.
 113. Hinojosa-Laborde C., A.S. Greene, and A.W. Cowley, Jr. Whole-body autoregulation in conscious areflexic rats during hypoxia and hyperoxia. *Am. J. Physiol.* 256 (Heart Circ. Physiol. 25): H1023-H1029, 1989.
 114. Cowley, A.W. Jr., and J. Brennan. Association of Chairman of Departments of Physiology Annual

- Questionnaire Results. *The Physiologist* 32(2): 25-31, 1989.
115. Cowley, A.W. Jr., C. Hinojosa-Laborde, B.J. Barber, D.R. Harder, J.H. Lombard, and A.S. Greene. Short-term autoregulation of systemic blood flow and cardiac output. *NIPS* 4: 219-225, 1989.
 116. Brown, D.R., A.W. Cowley, Jr., and D.B. Young. Blood pressure responses to cyclic blood volume changes in awake and anesthetized dogs. *Am. J. Physiol.* 256 (Reg. Integ. Comp. Physiol. 25): R827-R835, 1989.
 117. Krieger, J.E., R.J. Roman, and A.W. Cowley, Jr. Hemodynamics and blood volume in angiotensin II salt-dependent hypertension in dogs. *Am. J. Physiol.* 257 (Heart Circ. Physiol. 26): H1402-H1412, 1989.
 118. Raff, H., M.M. Skelton, and A.W. Cowley, Jr. Feedback control of vasopressin and corticotrophin secretion in conscious dogs: effect of hypertonic saline. *J. Endocrinol.* 122: 41-48, 1989.
 119. Lewin, R.F., H. Raff, J.W. Findling, M.M. Skelton, A.W. Cowley, Jr., J.F. King, and G. Dorros. Stimulation of atrial natriuretic peptide and vasopressin during percutaneous transluminal aortic valvuloplasty. *Am. Heart Journal* 118(2): 292-298, 1989.
 120. Hinojosa-Laborde, C., J.W. Osborn, Jr., and A.W. Cowley, Jr. Hemodynamic effects of endothelin in conscious rats. *Am. J. Physiol.* 256: H1742-H1746, 1989.
 121. Groban L, Ebert TJ, Kreis DU, Skelton MM, Van Wynsberghe DM, Cowley AW Jr. Hemodynamic, renal, and hormonal responses to incremental ANF infusions in humans. *Am J Physiol.* 256 (5 Pt 2): F780-6, 1989.
 122. Merrill, D.C., T.J. Ebert, M.M. Skelton, and A.W. Cowley, Jr. Effect of plasma sodium on aldosterone secretion during Angiotensin II stimulation in normal humans. *Hypertension* 14: 164-169, 1989.
 123. Cowley, A.W. Jr., and J.E. Krieger. Role of fluid volume retention in Angiotensin II salt-dependent hypertension. *Acta. Physiol. Scand.* 139 (Suppl. 591): 100-106, 1990.
 124. Krieger, J.E., and A.W. Cowley, Jr. Prevention of salt angiotensin II hypertension by servo control of body water. *Am. J. Physiol.* 258 (Heart Circ. Physiol. 27): H994-H1003, 1990.
 125. Krieger, J.E., J.F. Liard, and A.W. Cowley, Jr. Hemodynamics, fluid volume and hormonal responses to chronic high salt intake in dogs. *Am. J. Physiol.* 259 (Heart Circ. Physiol. 28): H1629-H1636, 1990.
 126. Marsh, D.J., J.L. Osborn, and A.W. Cowley, Jr. 1/f Fluctuations in arterial pressure and regulation of renal blood flow in dogs. *Am. J. Physiol.* 258 (Renal Fluid Electrolyte Physiol. 27): F1394-F1400, 1990.
 127. Greene, A.S., Z.Y. Yu, R.J. Roman, and A.W. Cowley, Jr. Role of blood volume expansion in the Dahl rat model of hypertension. *Am. J. Physiol.* 258 (Heart Circ. Physiol. 27): H508-H514, 1990.
 128. Raff H, Skelton MM, Cowley AW Jr. Cortisol inhibition of vasopressin and ACTH responses to arterial hypotension in conscious dogs. *Am J Physiol.* 258 (1 Pt 2): R64-9, 1990.
 129. Hansen-Smith, F.M., A.S. Greene, A.W. Cowley, Jr., and J.H. Lombard. Structural changes during microvascular rarefaction in chronic hypertension. *Hypertension* 15 (6, pt.2): 922-928, 1990.
 130. Hinojosa-Laborde, C., R.L. Thunhorst, and A.W. Cowley, Jr. Vasoconstriction during volume expansion is independent of central control. *Hypertension* 15: 712-717, 1990
 131. Groban, L., A.W. Cowley, Jr., and T.J. Ebert. Atrial natriuretic peptide augments forearm capillary filtration in humans. *Am. J. Physiol.* 259 (Heart Circ. Physiol. 28): H258-H263, 1990.
 132. Hellebrekers, L.J., J.F. Liard, A.L. Laborde, A.S. Greene, and A.W. Cowley, Jr. Regional autoregulatory responses during infusion of vasoconstrictor agents in conscious dogs. *Am. J. Physiol.* (Heart Circ. Physiol. 28): H1270-H1277, 1990.
 133. Greene, A.S., J.H. Lombard, A.W. Cowley, Jr., and F.M. Hansen-Smith. Microvessel changes in hypertension measured by griffonia simplicifolia I lectin. *Hypertension* 15: 779-783, 1990.
 134. Cowley, A.W. Jr. Salt and hypertension - future directions. *Hypertension* 17(suppl. I): I-205 - I-210, 1991.
 135. Raff, H., P.E. Papanek, and A.W. Cowley, Jr. ACTH and vasopressin responses to insulin-induced hypoglycemia in intact and neurohypophysectomized conscious dogs. *Neuroendocrinology* 53: 85-90, 1991.
 136. Shen, Y.T., A.W. Cowley, Jr., and S.F. Vatner. Relative roles of cardiac and arterial baroreceptors in vasopressin regulation during hemorrhage in conscious dogs. *Circ. Res.* 68: 1422-1436, 1991.
 137. Cowley, A.W. Jr., R.J. Roman, and J.E. Krieger. Pathways linking renal excretion and arterial pressure with vascular structure and function. *Clin. Exp. Pharmacol. Physiol.* 18: 21-27, 1991.
 138. Cowley, A.W. Jr., and M.M. Skelton. Dominance of colloid osmotic pressure in renal excretion after isotonic volume expansion. *Am. J. Physiol.* 261 (Heart Circ. Physiol. 30): H1214-H1225, 1991.
 139. Hansen-Smith, F., A.S. Greene, A.W. Cowley, Jr., L. Lougee, and J.H. Lombard. Structural alterations of microvascular smooth muscle cells in reduced renal mass hypertension. *Hypertension* 17: 902-908, 1991.

140. Hinojosa-Laborde, C., B.H. Frohlich, and A.W. Cowley, Jr. Contribution of regional vascular responses to whole body autoregulation in conscious areflexic rats. *Hypertension* 17: 1078-1084, 1991.
141. Dawson, C.A., A.W. Cowley, Jr., G.B. Spurr, J.L. Osborn, H. Roff, H.V. Forster, D.R. Harder, J.F. Liard, J.H. Lombard and W.J. Stekiel. Performance on multiple choice/short answer tests is not a sufficient criterion for evaluating the educational value of live animal laboratories in the teaching of physiology [letter; comment]. *Am. J. Physiol.* 261 (6, pt.3): S34-S35.
142. Cowley, A.W. Jr. Long-term control of arterial blood pressure. *Physiol. Rev.* 72: 231-300, 1992.
143. Cowley, A.W., Jr., A.G. Brice, and M.M. Skelton. Saline diuresis-natriuresis in unanesthetized dogs: a missing atrial factor? *Am. J. Physiol.* 263 (Heart Circ. Physiol. 32): H792-H797, 1992.
144. Cowley, A.W. Jr., R.J. Roman, F.J. Fenoy, and D.L. Mattson. Effect of renal medullary circulation on arterial pressure. *J. Hypertens.* 10: S187-S193, 1992.
145. Ebert, T.J., and A.W. Cowley, Jr. Baroreflex modulation of sympathetic outflow during physiological increases of vasopressin in humans. *Am. J. Physiol.* 262 (Heart Circ. Physiol. 31): H1372-H1378, 1992.
146. Ebert, T.J., L. Groban, M. Muzi, M. Hanson, and A.W. Cowley, Jr. ANP-mediated volume depletion attenuates renal responses in humans. *Am. J. Physiol.* 263 (Reg. Integ. Comp. Physiol. 6): R1303-R1308, 1992.
147. Hernandez, I., A.W. Cowley, Jr., J.H. Lombard, and A.S. Greene. Salt intake and angiotensin II alter microvessel density in the cremster muscle of normal rats. *Am. J. Physiol.* 263 (Heart Circ. Physiol. 32): H664-H667, 1992.
148. Hinojosa-Laborde, C., B.H. Frohlich, and A.W. Cowley, Jr. Whole-body autoregulation in reduced renal mass hypertension. *Hypertension* 20: 659-665, 1992.
149. Lu, S., R.J. Roman, D.L. Mattson, and A.W. Cowley, Jr. Renal medullary interstitial infusion of diltiazem alters sodium and water excretion in the rat. *Am. J. Physiol.* (Reg. Integ. Comp. Physiol. 32): R1064-R1070, 1992.
150. Mattson, D.L., R.J. Roman, and A.W. Cowley, Jr. Role of nitric oxide in renal papillary blood flow and sodium excretion. *Hypertension* 19: 766-769, 1992.
151. Monos, E., S.J. Contney, A.W. Cowley, Jr., and W.J. Stekiel. Axial extension of vein induces endothelium-dependent cell membrane hyperpolarization in the smooth muscle in vivo. *Pflugers Arch.* 420: 470, 1992.
152. Raff, H., P.E. Papanek, and A.W. Cowley, Jr. Effect of hypotension and hyperosmolality on vasopressin and ACTH responses to hypoglycemia in conscious dogs. *Am. J. Physiol.* 263 (Reg. Integ. Comp. Physiol. 32): R382-R388, 1992.
153. Rusch, N.J., R.G. DeLucena, T.A. Wooldridge, S.K. England, and A.W. Cowley, Jr. A Ca²⁺-dependent K⁺ current is enhanced in arterial membranes of hypertensive rats. *Hypertension* 19: 301-307, 1992.
154. Sheldahl, L.M., F.E. Tristani, T.P. Connelly, S.G. Levandoski, M.M. Skelton, and A.W. Cowley, Jr. Fluid-regulating hormones during exercise when central blood volume is increased by water immersion. *Am. J. Physiol.* 262 (Reg. Integ. Comp. Physiol. 31): R779-R785, 1992.
155. Greene AS, Tonellato PJ, Zhang Z, Lombard JH, Cowley AW Jr. Effect of microvascular rarefaction on tissue oxygen delivery in hypertension. *Am J Physiol.* 262(5 Pt 2): H1486-93, 1992.
156. Cowley, A.W. Jr., V. Dzau, P. Buttrick, J. Cooke, R.B. Devereux, C.L. Grines, G.C. Haidet and M.D. Thames. Working group on noncoronary cardiovascular disease and exercise in women. *Med. Sci. Sports. Exerc.* 24(6): S277-S287, 1992.
157. Mattson, D.L., and A.W. Cowley, Jr. Kinin actions on renal papillary blood flow and sodium excretion. *Hypertension* 21: 961-965, 1993.
158. Mattson, D.L., S. Lu, R.J. Roman, and A.W. Cowley, Jr. Relationship between renal perfusion pressure and blood flow in different regions of the kidney. *Am. J. Physiol.* 264 (Reg. Integ. Comp. Physiol. 33): R578-R583, 1993.
159. Lu, S., D.L. Mattson, R.J. Roman, C.G. Becker and A.W. Cowley, Jr. Assessment of changes in intrarenal blood flow in conscious rat using laser-Doppler flowmetry. *Am. J. Physiol.* 264 (Renal Fluid Electrolyte Physiol. 33): F956-F962, 1993.
160. Papanek, P.E., K.C. Bovee, M.M. Skelton, and A.W. Cowley, Jr. The chronic pressure-natriuresis relationship in dogs with inherited essential hypertension. *Am. J. Hypertens.* 6: 960-967, 1993.
161. Hudetz AG, Greene AS, Fehér G, Knuese DE, Cowley AW Jr. Imaging system for three-dimensional mapping of cerebrocortical capillary networks in vivo. *Microvasc Res.* 46(3):293-309, 1993.
162. Monos, E., S.J. Contney, G. Dornyei, A.W. Cowley, Jr., and W.J. Stekiel. Hyperpolarization of in situ rat saphenous vein in response to axial stretch. *Am. J. Physiol.* 265 (Heart Circ. Physiol. 3): H857-H861,

- 1993.
163. Cowley, A.W. Jr., E. Szczepanska-Sadowska, K. Stepniakowski and D. Mattson. Chronic intravenous administration of V1 arginine vasopressin agonist results in sustained hypertension. *Am. J. Physiol.* 267 (Heart Circ. Physiol. 36): H751-H756, 1994.
 164. Salgado HC, Skelton MM, Salgado MC, Cowley AW Jr. Physiopathogenesis of acute aortic coarctation hypertension in conscious rats. *Hypertension* 23(1 Suppl):I78-81, 1994.
 165. Mattson, D.L., S.H. Lu, K. Nakanishi, P.E. Papanek and A.W. Cowley, Jr. Effect of chronic renal medullary nitric oxide inhibition on blood pressure. *Am. J. Physiol.* 266 (Heart Circ. Physiol. 35): H1918-H1926, 1994.
 166. Lu, S., D.L. Mattson, and A.W. Cowley, Jr. Renal medullary captopril delivery lowers blood pressure in spontaneously hypertensive rats. *Hypertension* 23: 337-345, 1994.
 167. Gross, V., R.J. Roman and A.W. Cowley, Jr. Abnormal pressure-natriuresis in transgenic renin gene rats. *J. Hypertens.* 12: 1029-1034, 1994.
 168. Cowley, A.W., Jr., M.M. Skelton, P.E. Papanek, and A.S. Greene. Hypertension induced by high salt intake in absence of volume retention in reduced renal mass rats. *Am. J. Physiol.* 267 (Heart Circ. Physiol. 36): H1707-H1712, 1994.
 169. Szczepanska-Sadowska, E., K. Stepniakowski, M.M. Skelton and A.W. Cowley, Jr. Prolonged stimulation of intrarenal V1 vasopressin receptors results in sustained hypertension. *Am. J. Physiol.* 267 (Reg. Integ. Comp. Physiol. 36): R1217-R1225, 1994.
 170. Raff, H., P.E. Papanek, J.F. Liard and A.W. Cowley, Jr. The Effect of intracarotid vasopressin infusion on ACTH release in neurohypophysectomized, conscious dogs. *Am. J. Physiol.* 267 (Reg. Integ. Comp. Physiol. 36): R653-R658, 1994.
 171. Nakanishi, K., D.L. Mattson, and A.W. Cowley, Jr. Role of renal medullary blood flow in the development of L-NAME hypertension in rats. *Am. J. Physiol.* 268 (Reg. Integ. Comp. Physiol. 37): R317-R323, 1995.
 172. Ledderhos, C., D.L. Mattson, M.M. Skelton and A.W. Cowley, Jr. In vivo diuretic actions of renal vasopressin V1 receptor stimulation in rats. *Am. J. Physiol.* 268 (Reg. Integ. Comp. Physiol. 37): R796-R807, 1995.
 173. Zou, A.-P., E.E. Muirhead, A.W. Cowley, Jr., D.L. Mattson, J.R. Falck, J. Jiang, and R.J. Roman. Role of changes in renal hemodynamics and P450 metabolites of arachidonic acid in the reversal of 1K,1C-hypertension. *J. Hypertens.* 13: 557-566, 1995.
 174. Cowley, A.W. Jr. Franz Volhard Lecture: Evolution of the medullipin concept of blood pressure control: a tribute to Eric Muirhead: . *J. Hypertens.* 12 (suppl. 10): S25-S34, 1994.
 175. Nakanishi, K., D.L. Mattson, V. Gross, R.J. Roman and A.W. Cowley, Jr. Control of renal medullary blood flow by vasopressin V1 and V2 receptors. *Am. J. Physiol.* 269 (Reg. Integ. Comp. Physiol. 38): R193-R200, 1995.
 176. Cowley, A.W. Jr., D.L. Mattson, S. Lu, and R.J. Roman. The renal medulla and hypertension. *Hypertension* 25: 663-673, 1995.
 177. Cowley, A.W. Jr. A Tribute to Eric Muirhead: Evolution of the medullipin concept of blood pressure control. *Nephrol. Dial. Transplant.* 10: 1137-1141, 1995.
 178. Cowley, A.W. Jr. Genetic and nongenetic determinants of salt sensitivity and blood pressure. *Am. J. Clin. Nutr.* 65 (Suppl.): 587S-593S, 1997.
 179. Franchini, K.G., and A.W. Cowley, Jr. Sensitivity of the renal medullary circulation to plasma vasopressin. *Am. J. Physiol.* 271 (Reg. Integ. Comp. Physiol. 40): R647-R653, 1996.
 180. Franchini, K.G., and A.W. Cowley, Jr. Renal cortical and medullary blood flow responses during water restriction: Role of vasopressin. *Am. J. Physiol.* 270 (Reg. Integ. Comp. Physiol. 39): R1257-R1264, 1996.
 181. Cowley, A.W. Jr., and R.J. Roman. Role of the kidney in hypertension. *JAMA*, 275: 1581-1589, 1996.
 182. Hudetz, A.G., G. Feher, and J.P. Kampine. Heterogenous autoregulation of cerebrocortical capillary flow: evidence for functional thoroughfare channels? *Microvascular Research* 51: 131-136, 1996.
 183. Zou, Ai-Ping and Allen W. Cowley, Jr. Nitric oxide in renal cortex and medulla: an in vivo microdialysis study. *Hypertension* 29: 194-198, 1997.
 184. Franchini, K.G., D.L. Mattson, and A.W. Cowley, Jr. Vasopressin modulation of medullary blood flow and pressure: natriuresis-diuresis in the decerebrated rat. *Am. J. Physiol.* 272 (Reg. Integ. Comp. Physiol.41), R1472-R1479, 1997.
 185. Cowley, A.W., Jr. The role of the renal medulla in volume and arterial pressure regulation. *Am. J. Physiol.* 273 (Reg. Integ. Comp. Physiol.42): R1-R15, 1997.

186. Park, F., D.L. Mattson, M.M. Skelton, and A.W. Cowley, Jr. Localization of the vasopressin V1A and V2 receptors within the renal cortical and medullary circulation. *Am. J. Physiol.* 273 (Reg. Integ. Comp. Physiol. 42): R243-R251, 1997.
187. Herzig, T.C., S.M. Jobe, J.D. Molkentin, A.W. Cowley, Jr. and B.E. Markham. Angiotensin II type 1a receptor gene expression in the heart: AP-1 and GATA-4 mediate the response to pressure overload. *Proc. National Acad. Sci.* 94: 7543-7548, 1997.
188. Park, F., D. L. Mattson, L.A. Roberts, and A.W. Cowley, Jr. Evidence for the presence of smooth muscle alpha actin within pericytes of the renal medulla. *American Journal of Physiology (Renal, Integrative, and Comparative)* 273: R1742-R1728, 1997.
189. Mattson, D.L., S. Lu and A.W. Cowley, Jr. Role of nitric oxide in the control of the renal medullary circulation. *Clinical and Experimental Pharmacology and Physiology* 24: 587-590, 1997.
190. Cowley, A.W. Jr. The Banbury Conference Genomics to Physiology and Beyond: How do we get there? *The Physiologist* 40(5): 205-211, 1997.
191. Cowley, A.W., Jr. 70th President of APS. Can APS capture the bright future of physiology? *The Physiologist* 40(2): 49, 58-64, 1997.
192. Zou, Ai-Ping, F. Wu and A.W. Cowley, Jr. Protective effect of angiotensin II-induced increase in nitric oxide in the renal medullary circulation. *Hypertension* 31[part 2]: 271-276, 1997.
193. Cowley, A.W., Jr., J.A. Schafer, and L.G. Navar. Animal Rights (letter). *Science* 278 (5338): 557; discussion 560, 1997.
194. Park, F., G. Koike and A.W. Cowley, Jr. Regional time-dependent changes in vasopressin V2 receptor expression in the rat kidney during water restriction. *American Journal of Physiology* 274 (Renal Physiology 43): F906-F913, 1998
195. Gross, V., T. Kurth, M.M. Skelton, D.L. Mattson and A.W. Cowley, Jr. Effects of daily sodium intake and angiotensin II upon cortical and medullary renal blood flow in conscious rats. *American Journal of Physiology* 274 (Reg. Integ. and Comp. Physiol. 43): R1317-R1323, 1998.
196. Park, F., Ai-Ping Zou, C. Maeda, M. Szentivanyi, Jr., and A.W. Cowley, Jr. Arginine vasopressin-mediated stimulation of nitric oxide within the rat renal medulla. *Hypertension* 32: 896-901, 1998.
197. Cowley, A.W., Jr., M. Skelton, and T.M. Kurth. Effects of long-term vasopressin receptor stimulation on medullary blood flow and arterial pressure. *American Journal of Physiology (Reg. Integ. and Comp. Physiol.)* 275(5): R1420-1424, 1998.
198. Miyata, N., A.P. Zou, D.L. Mattson, and A.W. Cowley, Jr. Renal medullary interstitial infusion of L-arginine prevents hypertension in Dahl salt-sensitive rats. *American Journal of Physiology (Reg. Integ. and Comp. Physiol.)* 275(5): R1667-1673, 1998.
199. Ledderhos, C., V. Gross, and A.W. Cowley, Jr. Pharmacological stimulation of arterial chemoreceptors in conscious rats produces differential responses in renal cortical and medullary blood flow. *Clinical and Experimental Pharmacology and Physiology* 25(7-8): 536-40, 1998.
200. Mattson, D.L., C.Y. Maeda, T.D. Bachman, and A.W. Cowley, Jr. Inducible nitric oxide synthase and blood pressure. *Hypertension*, 31(1): 15-20, 1998.
201. Zou, A.P. and A.W. Cowley, Jr. Role of nitric oxide in the control of renal function and salt sensitivity. *Current Hypertension Disease Reports* 1: 178-186, 1999.
202. Zou, A.P., F. Wu, P.L. Li, and A.W. Cowley, Jr. Effect of chronic salt loading on adenosine metabolism and receptor expression in renal cortex and medulla in rats. *Hypertension* 33[part II]: 511-516, 1999.
203. Zou A.P., K. Nithipatikom, P.L. Li, and A.W. Cowley, Jr. Role of renal medullary adenosine in the control of blood flow and sodium excretion. *Am. J. Physiol. (Regulatory, Integrative, and Comparative)* 276: R790-798, 1999.
204. Cowley, A.W., Jr. The emergence of physiological genomics. *J. Vasc. Res.* 36 (2): 83-90, 1999.
205. Szentiványi, M. Jr., C.Y. Maeda, and A.W. Cowley, Jr. Local renal medullary L-NAME infusion enhances the effect of chronic angiotensin II treatment. *Hypertension* 33[partII]: 440-445 1999.
206. Miyata, N. and A.W. Cowley, Jr. Renal intramedullary infusion of L-arginine prevents reduction of medullary blood flow in Dahl salt-sensitive rats. *Hypertension*, 33[partII]: 445-450, 1999.
207. Miyata, N., F. Park, X.F. Li, and A.W. Cowley, Jr. Distribution of angiotensin AT1-AT2 receptor subtypes in the rat kidney. *Am. J. Physiol. (Renal)* 277: F437-F446, 1999.
208. Mattson, D.L. and A.W. Cowley, Jr. Renal mechanisms of hypertension. *Current Opinions in Nephrology* 8: 217-224, 1999.
209. Wu, F., F. Park, A.W. Cowley, Jr., and D.L. Mattson. Nitric oxide synthase activity in microdissected segments of the Sprague Dawley rat kidney. *Am. J. Physiol. (Renal Physiol.)* 276: F874-F881, 1999.
210. Nayeem, M.A., H.A. Olanrewaju, S.J. Mustafa, P.L. Li, and A.W. Cowley, Jr. Chronic salt loading and the

- expression of adenosine receptor subtypes. [letter], *Hypertension* (online):e18-19, 1999.
211. Orlov, S.N., Z. Pausova, F. Gossard, D. Gaudet, J. Tremblay, T. Kotchen, A.W. Cowley, Jr., P. Larochell, and P. Hamet. Sibling resemblance of erythrocyte ion transporters in French-Canadian sibling-pairs affected with essential hypertension. *J. Hypertension* 17, 1859-1865, 1999.
212. Dzau, V., M. Frank, M. Reich, M.J. Finley Austin, R. Aebersold, A.W. Cowley, Jr., D. Housman, R. Mulligan, and R. Rosenberg. Constants and scientific progress. *Physiological Genomics* 1: 107, 1999. (editorial)
213. Dzau, V. J., M.J. Finley Austin, P. Brown, A.W. Cowley, Jr., D. Housman, R. Mulligan, and R. Rosenberg. Revolution and renaissance. *Physiological Genomics* 1: 1-2, 1999. (editorial)
214. Cowley, A.W., Jr., M. Stoll, A.S. Greene, M.L. Kaldunski, R.J. Roman, P.J. Tonellato, N.J. Schork, and H.J. Jacob. Genetically defined risk of salt-sensitivity within a population of F2 rats from a Brown Norway and Dahl S derived intercross. *Physiological Genomics* 2:107-115, 2000.
215. Szentivanyi, M., Jr., F. Park, C.Y. Maeda, and A.W. Cowley, Jr. Nitric oxide in the renal medulla protects from vasopressin-induced hypertension. *Hypertension* 35: 740-745, 2000.
216. Szentivanyi, M., Jr., A-P. Zou, C.Y. Maeda, D.L. Mattson, and A.W. Cowley, Jr. Increase in renal medullary nitric oxide synthase activity protects from norepinephrine-induced hypertension. *Hypertension*, 35: 418-423, 2000.
217. Cowley, A.W., Jr. Control of the renal medullary circulation by vasopressin V1 and V2 receptors. *Experimental Physiology* 85: 223S-231S, 2000.
218. Zou, A.-P., H. Billington, N. Su, and A.W. Cowley, Jr. Expression and actions of heme oxygenase in the renal medulla of rats. *Hypertension*, 35: 342-347, 2000.
219. Zou, A.P. and A.W. Cowley, Jr. Alpha-2 adrenergic receptor-mediated increase in NO production buffers renal medullary vasoconstriction. *Am. J. Physiol. (Regulatory Integrative Com. Physiol.)* 279: R769-R777, 2000.
220. Johnson, R.J., K.L. Gordon, C. Giachilli, T. Kurth, M.M. Skelton, and A.W. Cowley, Jr. Tubulointerstitial injury and loss of nitric oxide synthases parallel the development of hypertension in the Dahl-SS rat. *J. Hypertension* 18: 1497-1505, 2000.
221. Kotchen, T.A., A.W. Peiring, A.W. Cowley, C.E. Grim, D. Gaudet, P. Hamet, M.L. Kaldunski, J.M. Kotchen, and R. J. Roman. Glomerular hyperfiltration in hypertensive African Americans. *Hypertension* 35: 822-826, 2000.
222. Kotchen, T.A., J.M. Kotchen, C.E. Grim, V. George, M.L. Kaldunski, A.W. Cowley, P. Hamet, and T. H. Celius. Genetic determinants of hypertension: identification of candidate phenotypes. *Hypertension* 36: 7-13, 2000.
223. Pausova, A. B. Deslauriers, D. Gaudet, J. Tremblay, T. A. Kotchen, P. Larochelle, A.W. Cowley, and P. Hamet. Role of tumor necrosis factor-alpha gene locus in obesity and obesity-associated hypertension in French Canadians. *Hypertension* 36(1): 14-19, 2000.
224. Stoll, M., A.E. Kwitek-Black, A.W., Cowley, Jr., E.L. Harris, S.B. Harrap, J.E. Krieger, M.P. Printz, A.P. Provoost, J. Sassard, and H.J. Jacob. New target regions for human hypertension via comparative genomics. *Genome Research* 10(4):473-482, 2000.
225. Cowley, A.W., Jr, Roman, R.J., Kaldunski, M.L., Dumas, P., Dickhout, J.G., Greene, A.S., and Jacob, H.J. Brown Norway chromosome 13 confers protection from high salt to consomic Dahl S rat. *Hypertension*, 37[Part 2]: 456-461, 2001.
226. Yuan, B. and A.W. Cowley, Jr. Evidence that reduced renal medullary NOS activity of Dahl S rats enables small elevations of AVP to produce sustained hypertension. *Hypertension*, 37 [part 2], pp. 524-528, 2001.
227. Tonellato, P.J., C.M. Kendzierski, and A.W. Cowley, Jr. Characterization of blood pressure dynamics of rats: a model based approach. *American Journal of Physiology (Heart and Circulation)*, in revision, 2001.
228. Stoll, M., Cowley, A.W. Jr., P. Tonellato, A. Greene, M.L. Kaldunski, R.J. Roman, P. Dumas, N. Schork, Z. Wang, and H.J. Jacob. A genomic-systems biology map for cardiovascular function. *Science*. 294: 1723-1726, 2001.
229. Zou, A.P., N. Li, A.W. Cowley, Jr. Production and actions of superoxide in the renal medulla. inducible factor -1a in renal medullary cells of rats. *Physiol Genomics* 6(3): 159-168, 2001.
230. Pausova, A., F. Gossard, D. Gaudet, J. Temblay, T.A. Kotchen, A.W. Cowley, Jr., and P. Hamet. Heritability estimates of obesity measures in siblings with and without hypertension. *Hypertension*. 38: 41-47, 2001.
231. Zou, A.P., Z. Z. Yang, P.L. Li, and A.W. Cowley, Jr. Oxygen-dependent expression of hypoxia-inducible

- factor -1a in renal medullary cells of rats. *Physiol Genomics* 6(3): 159-168, 2001.
232. Liang, M, B. Yuan, E. Rute, A.S. Greene, A. P. Zou, P. Soares, G. McQuestion, G.R. Slocum, H.J. Jacob, and A.W. Cowley, Jr. Rat renal medullary genes associated with salt-sensitive hypertension identified by chromosomal substitution and cDNA microarray. *Physiol Genomics* 8: 139-149, 2002.
233. Makino, A., A.P. Zou, and A.W. Cowley, Jr. Increased renal medullary oxidative stress produces hypertension. *Hypertension*. 39: 667-672, 2002.
234. Szentivanyi, M. Jr., A-P. Zou, D. L. Mattson, A.W. Cowley, Jr. Impaired renal medullary nitric oxide system exposes the Dahl salt-sensitive rats to angiotensin II-induced hypertension. *Am. J. Physiology (Regulatory, Integrative, and Comparative)* 283(1): R266-R272, 2002.
235. Monos, E., G. Raffai, S.J. Contney, W.J. Stekiel, A.W. Cowley, Jr. Axial stretching of extremity artery induces reversible hyperpolarization of smooth muscle cell membrane in vivo. *Acta Physiologica Hungarica*. 88(3-4):197-206, 2001.
236. Kendzierski, C.M., A. W. Cowley, Jr, A. S. Greene, H.C. Salgado, H.J. Jacog, and P.J. Tonellato. Mapping baroreceptor function to genome: a mathematical modeling approach. *Genetics* 160(4): 1687-1895, 2002.
237. Alonso-Galicia, M., K.G. Maier, A.S. Greene, A.W. Cowley, Jr, and R.J. Roman. Role of 20-hydroxyeicosatetraenoic acid in the renal and vasoconstrictor actions of angiotensin II. *Am J Physiol (Regulatory, Integrative, and Comparative)* 283: R60-R68, 2002.
238. Pausova, Z, M. Jomphe, L. Houde, H. Vezina, S.N. Orlov, F. Gossard, D. Gaudet, J. Tremblay, T.A. Kotchen, A.W. Cowley, Jr, G. Bouchard, and P. Hamet. A genealogical study of essential hypertension with and without obesity in French Canadians. *Obesity Research* 10 (6): 463-470, 2002.
239. Dickhout, J, T. Mori, and A.W. Cowley, Jr. Tubulovascular nitric oxide crosstalk: buffering of angiotensin II-induced medullary vasoconstriction. *Circ Res*. 91: 487-493, 2002.
240. Mori, T., J.G. Dickhout, and A.W. Cowley, Jr. Vasopressin increases intracellular NO concentration via Ca²⁺ signaling in inner medullary collecting duct. *Hypertension*. 39[part 2]: 465-469, 2002.
241. Kotchen, T.A., U. Broeckel, C.E. Grim, P. Hamet, H.J. Jacob, M.L. Kaldunski, J.M. Kotchen, N.J. Schork, P.J. Tonellato, and A.W. Cowley, Jr. Identification of hypertension-related QTLs in African American sib pairs. *Hypertension*. 40:634-639, 2002.
242. Roman RJ, Cowley AW Jr, Greene A, Kwitek AE, Tonellato PH, Jacob HJ. Consomic rats for the identification of genes and pathways underlying cardiovascular disease. *Cold Spring Harb Symp Quant Biol*. 67: 309-315, 2002.
243. Liang, M., B. Yuan, E. Rute, A.S. Greene, M. Olivier, and A.W. Cowley, Jr. Insights into Dahl salt-sensitive hypertension revealed by temporal patterns of renal medullary gene expression. *Articles in Press. Physiol. Genomics* 12:229-237, 2003.
244. Mori, T. and A.W. Cowley, Jr. Angiotensin II-NAD(P)H oxidase-stimulated superoxide modifies tubulovascular nitric oxide cross-talk in renal outer medulla. *Hypertension*. 42(4): 588-593, 2003.
245. Cowley A. W., Jr. Physiological Genomics: The next three years. *Physiol Genomics* 14(3): 169-170, 2003.
246. Hall, J.E., A.W. Cowley, Jr., V.S. Bishop, D.N. Granger, L.G. Nava, and A.E. Taylor. In memoriam. Arthur C. Guyton (1919-2003). *Physiologist* 46(3): 126-128, 2003.
247. Roman, R.J., A.W. Cowley, Jr., A.S. Greene, A.E. Kwitek, P.J. Tonellato, and H.J. Jacob. Consomic rats for the identification of genes and pathways underlying cardiovascular disease. *Cold Spring Harb Symp Quant Biol*. 67: 309-315, 2002.
248. Liang, M., A.G. Briggs, E. Rute, A.S. Greene, and A.W. Cowley, Jr. Quantitative assessment of the importance of dye switching and biological replication in the cDNA miroarray studies. *Physiol Genomics* 14(3): 199-207, 2003.
249. Chen Y.F., A.W. Cowley, Jr., and A.P. Zou. Increased H₂O₂ counteracts the vasodilator and natriuretic effects of superoxide dismutation by tempol in the renal medulla. *Am J Physiol* 285(4): R827-R833, 2003.
250. Makino A, M.M. Skelton, A.P. Zou, and A.W. Cowley, Jr. Increased renal medullary H₂O₂ leads to hypertension. *Hypertension* 42(1): 25-30, 2003.
251. Cowley A.W., Jr, T. Mori, D.L. Mattson, and A.P. Zou. Role of renal NO production in the regulation of medullary blood flow. *Am J Physiol*. 284(6): R1355-1369, 2003.
252. Yuan B., M. Liang, Z. Yang, E. Rute, N. Taylor, M. Olivier, and A.W. Cowley, Jr. Gene expression reveals vulnerability to oxidative stress and interstitial fibrosis of renal outer medulla to non-hypertensive elevations of AngII. *Am J Physiol*. 284(5): R1219-1230, 2003.
253. Cowley, A.W., Jr. Genomics and homeostasis. *Am J Physiol*. 284: R611-R627, 2003.
254. Cowley, A.W., Jr. and R.J. Roman. Countercurrent exchange in the renal medulla. *Am J Physiol*. 284(5):

- R1151, 2003. [Editorial Focus] Zou, A.P. and A.W. Cowley, Jr. Reactive oxygen species and molecular regulation of renal oxygenation. *Acta Physiol Scand.* 179(3): 233-241, 2003.
255. Moreno, C., P. Dumas, M.L. Kaldunski, P.J. Tonelatto, A.S. Greene, R.J. Roman, Q. Cheng, Z. Wang, H.J. Jacob, and A.W. Cowley, Jr. Genomic map of cardiovascular phenotypes of hypertension in female Dahl S rats. *Physiol Genomics* 15(3): 243-257, 2003.
256. Mattson D.L., M.P. Junert, M.L. Kaldunski, A.S. Greene, R.J. Roman, H.J. Jacob, A.W. Cowley, Jr. Influence of diet and genetics on hypertension and renal disease in Dahl salt-sensitive rats. *Physiol. Genomics* 16(2): 194-2003, 2004.
257. Mori T. and A.W. Cowley, Jr. Role of pressure in angiotensin II-induced renal injury: chronic servo-control of renal perfusion pressure in rats. *Hypertension* 43: 752-759, 2004.
258. Cowley, A.W. Jr. The elusive field of systems biology. *Physiol. Genomics* 16: 285-286, 2004.
259. Mori, T. and A.W. Cowley, Jr. Renal oxidative stress in medullary thick ascending limbs produced by elevated NaCl and glucose. *Hypertension* 43: 341-346, 2004.
260. Cowley, A.W., Jr., R.J. Roman and H.J. Jacob. Application of chromosomal substitution techniques in gene-function discovery. *J. Physiol.* 554: 46-55, 2004.
261. Liang, M., A.W. Cowley, Jr., and A.S. Greene. High throughput gene expression profiling: a molecular approach to integrative physiology. *J. Physiol.* 554: 22-30, 2004.
262. Cowley, A.W., Jr. Physiological genomics: tools and concepts. *J. Physiol.* 554 (Pt 1): 3, 2004.
263. Cowley, A.W., Jr., M. Liang, R.J. Roman, A.S. Greene, H.J. Jacob. Consomic rat model systems for physiological genomics. *Acta Physiol Scand.* 181(4): 585-592, 2004.
264. Basile D.P., K. Fredrich, M. Alausa, C.P. Vio, M. Liang, M.R. Rieder A.S. Greene, A.W. Cowley Jr. Identification of persistently altered gene expression in the kidney after functional recovery from ischemic acute renal failure. *Am J Physiol.* 288(5): F953-F963, 2005.
265. Mattson D.L., M.P. Kunert, R.J. Roman, H.J. Jacob, A.W. Cowley, Jr. Substitution of chromosome 1 ameliorates L-NAME hypertension and renal disease in the fawn-hooded hypertensive rat. *Am J Physiol.* 288(5): F1015-F1022, 2005.
266. Dwinell M.R., H.V. Forster, J. Petersen, A. Rider, M.P. Junert, A.W. Cowley, Jr, H.J. Jacob. Genetic determinants on rat chromosome 6 modulate variation in the hypercapnic ventilatory response using consomic strains. *J Appl Physiol.* 98(5): 1630-1638, 2005.
267. Grim C.E., A.W. Cowley Jr, P. Hamet, D. Gaudet, M.L. Kaldunski, J.M. Kotchen, S. Krishnaswami, Z. Pausova, R. Roman, J. Tremblay, T.A. Kotchen. Hyperaldosteronism and hypertension: ethnic differences. *Hypertension* 45(4): 766-772, 2005.
268. Hamet P., E. Merl, O. Seda, U. Broeckel, J. Tremblay, M. Kaldunski, D. Gaudet, G. Bouchard, B. Deslauriers, F. Gagnon, G. Antoniol, Z. Pausova, M. Labuda, M. Jomphe, F. Gossard, G. Tremblay, R. Kirova, P. Tonelatto, S.N. Orlov, J. Pintos, J. Platko, T.J. Hudson, J.D. Rioux, T.A. Kotchen, A.W. Cowley, Jr. Quantitative founder-effect analysis of French Canadian families identifies specific loci contributin to metabolic phenotypes of hypertension. *Am J Hum Genet.* 76: 815-832, 2005.
269. Liang M., A.W. Cowley Jr., M.J. Hessner, J. Lazar, D.P. Basile, J.L. Pietrusz. Transcriptome analysis and kidney research: toward systems biology. *Kidney Int.* 67(6): 2114-2122, 2005.
270. Sarkis A, Ito O, Mori T, Kohzuki M, Ito S, Verbalis J, Cowley AW Jr, Roman RJ. Cytoshrome P-450 dependent metabolism of arachidonic acid in the kidney of rats with diabetes insipidus. *Am J Physiol.* 289: F1333-F1340, 2005.
271. Taylor NE, Cowley AW Jr. Effect of renal medullary H₂O₂ on salt-induced hypertension and renal injury. *Am J Physiol.* 289: R1573-1579, 2005.
272. Cowley AW Jr. Focus on "Computational modeling of physiological systems". *Physiol Genomics.* 23: 4, 2005.
273. Pausova Z, Gaudet D, Gossard F, Bernard M, Kaldunski ML, Jomphe M, Tremblay J, Hudson TJ, Bouchard G, Kotchen TA, Cowley AW Jr, Hamet P. Genome-wide scan for linkage to obesity-associated hypertension in French Canadians. *Hypertension*, 46(6): 1280-1285, 2005.
274. Cowley AW Jr, Liang M. Physiology and gneomics: toward systems biology. *Sheng Li Xue Bao.* 58(1): 1-4, 2006.
275. Mori T, Cowley AW JR, Ito S. Molecular mechanisms and therapeutic strategies of chronic renal injury: physiological role of angiotensin II-induced oxidative stress in renal medulla. *J Pharmacol Sci.* 100(1): 2-8, 2006.
276. Taylor NE, Glocka P, Liang M, Cowley AW Jr. NAD(P)H oxidase in the renal medulla causes oxidative stress and contributes to salt-sensitive hypertension in Dahl S rats. *Hypertension* 47: 692-698, 2006.
277. Kwitek AE, Jacob HJ, Baker JE, Dwinell MR, Forster HV, Greene AS, Kunert MP, Lombard JH, Mattson

- DL, Pritchard KA Jr., Roman RJ, Tonellato PJ, Cowley AW Jr. BN phenome: detailed characterization of the cardiovascular, renal and pulmonary systems of the sequenced rat. *Physiol Genomics* 25: 303-313, 2006.
278. Abe M, O'Connor P, Kaldunski M, Liang M, Roman RJ, Cowley AW Jr. Effect of sodium delivery on superoxide and nitric oxide in the medullary thick ascending limb. *Am J Physiol*. 291: F350-F357, 2006.
279. Taylor NE, Maier KG, Roman RJ, Cowley AW Jr. NO synthase uncoupling in the kidney of Dahl S rats: Role of dihydrobiopterin. *Hypertension* 48(6): 1066-1071, 2006.
280. Kunert MP, Drenjancevic-Peric I, Dwinell MR, Lombard JH, Cowley AW Jr, Greene AS, Kwitek AE, Jacob HJ. Consomic strategies to localize genomic regions related to vascular reactivity in the Dahl salt-sensitive rat. *Physiol. Genomics* 26: 218-225, 2006.
281. Cowley AW Jr., IUPS--a retrospective. *Physiologist*. 49: 171-173, 2006.
282. Cowley AW Jr. The genetic dissection of essential hypertension. *Nat Rev Genet*. 7(11): 829-840, 2006.
283. Gutterman DD, Cowley AW Jr. Relating cardiac performance with oxygen consumption: historical observations continue to spawn scientific discovery. *Am J Physiol Heart Circ Physiol*. 291: H2555-H2556, 2006.
284. Michalkiewicz M, Michalkiewicz T, Geurts AM, Roman RJ, Slocum GR, Singer O, Weihrauch D, Greene AS, Kaldunski M, Verma IM, Jacob HJ, Cowley AW Jr. Efficient transgenic rat production by a lentiviral vector. *Am J Physiol Heart Circ Physiol*. 293: H881-H894, 2007.
285. Raj JU, Aliferis C, Caprioli RM, Cowley AW Jr, Davies PF, Duncan MW, Erle DJ, Erzurum SC, Finn PW, Ishiropoulos H, Kaminski N, Kleeberger SR, Leikauf GD, Loyd JE, Martin TR, Matalon S, Moore JH, Quakenbush J, Sabo-Attwood T, Shapiro SD, Schinitzer JE, Schwartz DA, Schwiebert LM, Sheppard D, Ware LB, Weiss ST, Whitsett JA, Wurfel MM, Matthay MA. Genomics and proteomics of lung disease: conference summary. *Am J Physiol Lung Cell Mol Physiol*. 293: L45-L51, 2007.
286. Mori T, O'Connor PM, Abe M, Cowley AW Jr. Enhanced superoxide production in renal outer medulla of Dahl salt-sensitive rats reduces nitric oxide tubular-vascular cross-talk. *Hypertension*. 49: 1336-1341, 2007.
287. O'Connor PM, Cowley AW Jr. Vasopressin-induced nitric oxide production in rat inner medullary collecting duct is dependent on V2 receptor activation of the phosphoinositide pathway. *Am J Physiol Renal Physiol*. 293: F526-F532, 2007.
288. Moreno C, Kaldunski ML, Wang T, Roman RJ, Greene AS, Lazar J, Jacob HJ, Cowley AW Jr. Multiple blood pressure loci on rat chromosome 13 attenuate development of hypertension in the Dahl S hypertensive rat. *Physiol Genomics*. 31(2): 228-235, 2007.
289. Mattson DL, Dwinell MR, Greene AS, Kwitek AE, Roman RJ, Cowley AW Jr, Jacob HJ. Chromosomal mapping of the genetic basis of hypertension and renal disease in FHH rats. *Am J Physiol*. 293: F1905-1914, 2007.
290. Seda O, Tremblay J, Gaudet D, Brunelle P-L, Gurau A, Merlo E, Pilote L, Orlov SN, Boulva F, Kotchen TA, Cowley AW Jr, Hamet P. Systematic genome-wide, sex-specific linkage of cardiovascular traits in French Canadians. *Hypertension*. 51: 1156-1162, 2008.
291. Cowley AW Jr. Harnessing "omic" tools and computational hypothesis-driven approaches to understand biocomplexity: the future of Physiological Genomics. *Physiol Genomics* 33(1): 1-2, 2008.
292. Tian Z, Greene AS, Usa K, Matus IR, Bauwens J, Pietrusz JL, Cowley AW Jr, Liang M. Renal regional proteomes in young Dahl salt-sensitive rats. *Hypertension* 51(4): 899-904, 2008.
293. Liang M, Lee NH, Wang H, Greene AS, Kwitek AE, Kaldunski ML, Lun TV, Frank BC, Bugenhagen S, Jacob HJ, Cowley AW Jr. Molecular networks in Dahl salt-sensitive hypertension based on transcriptome analysis of a panel of consomic rats. *Physiol Genomics* 34: 54-56, 2008.
294. Mori T, Polichnowski A, Glocka P, Kaldunski M, Ohsaki Y, Liang M, Cowley AW Jr. High perfusion pressure accelerates renal injury in salt-sensitive hypertension. *J Am Soc Nephrol*. 19: 1472-1482, 2008. [PMID: PMC2488259]
295. O'Connor P, Schreck C, Lu L, Cowley AW Jr. Enhanced amiloride sensitive superoxide production in renal medullary thick ascending limb of Dahl salt-sensitive rats. *Am J Physiol Renal Physiol*. 295: F726-&33, 2008. [PMID: PMC2536875]
296. Mattson DL, Dwinell MR, Greene AS, Kwitek AE, Roman RJ, Jacob HJ, Cowley AW Jr. Chromosome substitution reveals the genetic basis of Dahl salt-sensitive hypertension and renal disease. *Am J Physiol*. 295: F837-F842, 2008. [PMID: PMC2536867]
297. Cowley AW Jr. Renal medullary oxidative stress, pressure-natriuresis, and hypertension. *Hypertension*. 52(2): 777-786, 2008 [review]. [PMID: PMC2659638]

298. Liang M, Liu Y, Mladinov D, Cowley AW Jr, Trivedi H, Fang Y, Xu X, Ding X, Tian Z. MicroRNA: A new frontier in kidney and blood pressure research. *Am J Physiol.* 297: F553-F558, 2009. [PMCID: PMC2739705]
299. Jin C, Hu C, Polichnowski A, Mori T, Skelton M, Ito S, Cowley AW Jr. Effects of renal perfusion pressure on renal medullary hydrogen peroxide and nitric oxide production. *Hypertension.* 53: 1048-1053, 2009. [PMCID: PMC2777807]
300. Cowley AW Jr. Research recommendations from the fifth scientific meeting of the TMJ association: Can studies of comorbidities with TMJDs reveal common mechanisms of disease? *J Oral Rehabil.* 36(4): 237-239, 2009. [PMID: 19278375; no PMCID assigned]
301. O'Connor PM, Lu L, Liang M, Cowley AW Jr. A novel amiloride-sensitive H⁺ transport pathway mediates enhanced superoxide production in thick ascending limb of salt-sensitive rats, not Na⁺/H⁺ exchange. *Hypertension,* 54(2): 255-60, 2009. [PMCID: PMC2771701]
302. Tian Z, Liu Y, Usa K, Mladinov D, Fang Y, Ding X, Greene AS, Cowley AW Jr, Liang M. Novel role of fumarate metabolism in Dahl-salt sensitive hypertension. *Hypertension,* 54(2): 255-260, 2009. [PMCID: PMC2721687].
303. Polichnowski A, Cowley AW Jr. Pressure-induced renal injury in angiotensin II versus norepinephrine-induced hypertensive rats. *Hypertension.* 54(6): 1269-1277, 2009. [PMCID: PMC2812436].
304. Beetz N, Harrison MD, Brede M, Zong X, Urbanski MJ, Sietmann A, Kaufling J, Barrot M, Seeliger MW, Vieira-Coelho MA, Hamet P, Gaudet D, Seda O, Tremblay J, Kotchen TA, Kaldunski M, Nüsing R, Szabo B, Jacob HJ, Cowley AW Jr, Biel M, Stoll M, Lohse MJ, Broeckel U, Hein L. Phosducin influences sympathetic activity and prevents stress-induced hypertension in humans and mice. *J Clin Invest.* 119:3697-3612, 2009. [PMCID: PMC2786789]
305. Orlov SN, Gossard F, Pausova Z, Akimova OA, Tremblay J, Grim CE, Kotchen JM, Kotchen TA, Caudet D, Cowley AW, Hamet P. Decreased NKCC1 activity in erythrocytes from African Americans with hypertension and dyslipidemia. *Am J Hypertens.* 23(2): 321-326, 2010.
306. Lu L, Li P, Yang C, Kurth T, Misale M, Skelton MM, Moreno C, Roman RJ, Greene AS, Jacob HJ, Lazar J, Liang M, Cowley AW Jr. Dynamic convergence and divergence of renal genomic and biological pathways in protection from Dahl salt-sensitive hypertension. *Physiol Genomics.* 41:63-70,2010 [PMCID: PMC2841498]
307. Liu Y, Taylor NE, Lu L, Usa K, Cowley AW Jr, Ferreri NR, Yeo NC, Liang M. Renal medullary microRNAs in Dahl salt-sensitive rats: miR-29b regulates several collagens and related genes. *Hypertension.* 55(4): 974-982, 2010. [PMCID: PMC2862728]
308. O'Connor PM, Cowley AW Jr. Modulation of pressure-natriuresis by renal medullary reactive oxygen species and nitric oxide. *Curr Hypertens Rep.* 12(2): 86-92, 2010. [PMCID 20424920; PMCID in process]
309. Polichnowski AJ, Jin C, Yang C, Cowley AW Jr. Role of renal perfusion pressure versus angiotensin II on renal oxidative stress in angiotensin II-induced hypertensive rats. *Hypertension,* 55(6): 1425-1430, 2010. [PMCID: PMC2884003]
310. Bugenhagen SM, Cowley AW Jr, Beard DA. Identifying physiological origins of baroreflex dysfunction in salt-sensitive hypertension in the Dahl SS rat. *Physiol Genomics.* 42(1): 23-41, 2010. [PMID: 20354102; PMC2888563]
311. Shao H, Sinasac DS, Burrage LC, Hodges CA, Supelak PJ, Palmert MR, Moreno C, Cowley AW Jr, Jacob HJ, Nadeau JH. Analyzing complex traits with congenic strains. *Mamm Genome.* 21: 276-286, 2010. [PMID: 20524000; PMCID in process].
312. Hoffman RG, Kotchen JM, Kotchen TA, Cowley T, Dasgupta M, Cowley AW Jr. Temporomandibular disorders and associated clinical comorbidities. *Clin J Pain ,*27(3):268-274,2011.[PMID: 21178593; PMCID in process...not supported by any grant of AWC.
313. Cowley AW Jr. 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(6): 2009-2010, 2010. [PMID: 21188824; PMCID in process]
314. Moreno-Quinn C, Williams JM, Lu L, Liang M, Lazar J, Jacob HJ, Cowley AW Jr, Roman RJ. Narrowing a region on rat chromosome 13 that protects against hypertension in Dahl SS-13BN congenic strains. *Am J Physiol Heart Circ Physiol.* 300(4): H1530-535, 2011 [PMID: 21257920, PMC3075031].
315. Polichnowski AJ, Lu, L, Cowley AW Jr. Renal injury in angiotensin II + L-NAME-induced hypertensive rats is independent of elevated blood pressure. *Am J Physiol Renal.* 300(4):F1008-16, 2011 [PMID: 21270093, PMC3074995]

316. Ilatovskaya DV, Levchenko V, Ryan RP, Cowley AW Jr, Staruschenko A. NSAIDs acutely inhibit TRPC channels in freshly isolated rat glomeruli. *Biochem Biophys Res Commun.* 408(2):242-7, 2011 [PMID: 21473850, PMC3093766]

Books, Chapters, and Reviews

1. Guyton, A.C., A.W. Cowley, Jr., and T.G. Coleman. Interaction between the separate control systems in normal arterial pressure regulation and hypertension. In: *Hypertension*. Edited by J. Genest and E. Koiw. New York: Springer-Verlag, pp. 384-393, 1972.
2. Guyton, A.C., T.G. Coleman, A.W. Cowley, Jr., R.A. Norman, Jr., and J.F. Liard. Relationship of fluid and electrolytes to arterial pressure and control of hypertension: Quantitative analysis of infinite gain feedback system. In: *Hypertension: Mechanisms and Managements*. Edited by G. Onesti, K.E. Kin and J.H. Moyer. New York: Grune & Stratton, pp. 25-36, 1973.
3. Guyton, A.C., T.G. Coleman, A.W. Cowley, Jr., K.W. Scheel, R.D. Manning, Jr., and R.A. Norman, Jr. Arterial pressure regulation: Overriding dominance of the kidneys in long-term regulation and in hypertension. In: *Hypertension Manual*. Edited by J.H. Laragh. New York: New York Medical Books, pp. 111-134, 1973.
4. Coleman, T.G., A.W. Cowley, Jr., and A.C. Guyton. Experimental hypertension and the long-term control of arterial pressure. In: *International Review of Physiology, Physiology I*, pp. 259-298.
5. Cowley, A.W. Jr. Role of thirst and vasopressin in control of body fluid osmolality and volume. In: *Circulatory Physiology II: Dynamics and Control of the Body Fluids*. Edited by A.C. Guyton, A.E. Taylor, and H.J. Granger. Philadelphia: W.B. Saunders, pp. 274-290, 1975.
6. Guyton, A.C., A.W. Cowley, Jr., D.B. Young, T.G. Coleman, J.E. Hall, and J.W. DeClue. Integration and control of circulatory function. In: *International Review of Physiology, Cardiovascular Physiology II, Vol. 9*. Edited by A.C. Guyton and A.W. Cowley, Jr. Baltimore: University Park Press, pp. 341-385, 1976.
7. Cowley, A.W. Jr. Perspectives on the physiology of hypertension. In: *Cardiovascular Clinics. Hypertension: Clinical Diagnosis and Management*. Edited by G. Onesti and A.N. Brest. The Clarinda Company, Chap. 1, pp. 1-22, 1978.
8. Cowley, A.W. Jr. Basic principles of cardiac output and arterial pressure regulation. In: *Haemodynamic Changes in Anesthesia, Academie europeene d'anesthesiologie, Vol. I*, pp. 121-150, 1979.
9. Cowley, A.W. Jr. Regulation of cardiac output and its role in hypertension. In: *Hypertension Arterial 1980*. Edited by A.G. Caamano and L.A. Barreiro, pp. 225-338, 1980.
10. Cowley, A.W. Jr. Mechanisms of arterial pressure control in normal and hypertensive stages. In: *Hypertension Arterial 1980*. Edited by A.G. Caamano and L.A. Barreiro, pp. 213-224, 1980.
11. Cowley, A.W. Jr. The concept of autoregulation of total blood flow and its role in hypertension. In: *Topics of Hypertension*. Edited by J.H. Laragh. Yorke Medical Books, Chapter 10, pp. 184-200, 1980.
12. Cowley, A.W. Jr., E.W. Quillen, Jr., and B.J. Barber. Further evidence for lack of baroreceptor control of long-term level of arterial pressure. In: *Arterial Baroreceptors and Hypertension*. Edited by Peter Sleight. Oxford University Press, pp. 391-399, 1980.
13. Cowley, A.W. Jr., M.J. Smith, Jr., R.D. Manning, Jr., and T.E. Lohmeier. Pressor and volume effects of vasopressin. In: *Frontiers in Hypertension Research*. Edited by J.H. Laragh, F.R. Buhler, and D.W. Seldin. New York: Springer-Verlag, pp. 373-380, 1981.
14. Cowley, A.W. Jr. Role of vasopressin in arterial pressure regulation. Lecture presented to the Mexican Council on Hypertension, 1981. In: *Hypertension Arterial*. Edited by A.G. Caamano and L.A.D. Barreiro. Mexico, pp. 75-87, 1982.
15. Cowley, A.W. Jr., T.G. Coleman, and T.E. Lohmeier. Renal hypertension: A unifying theory. In: *Hypertension*. Edited by H. Villareal and M.D. Canada. John Wiley & Sons, Inc., pp. 99-108, 1981.
16. Cowley, A.W. Jr. Implications of intrinsic control of vascular resistance in hypertension. Lecture presented to the Mexican Council on Hypertension, 1981. In: *Hypertension Arterial*. Edited by A.G. Caamano and L.A.D. Barreiro. Mexico, pp. 57-69, 1982.
17. Cowley, A.W. Jr. Vasopressin and cardiovascular regulation. *Cardiovascular Physiology IV. International Review of Physiology, Volume 26*. Edited by A.C. Guyton and J.E. Hall. Baltimore: University Park Press, pp. 189-242, 1982.
18. Cowley, A.W. Jr. Sodium retention: an essential element in hypertension. Proceedings of the Lewis K. Dahl Symposium, 1981. In: *Salt and Hypertension*. Edited by J. Iwai, M.D. New York: Igaku-Shoin Medical Publishers, Inc., pp. 33-42, 1982.
19. Cowley, A.W. Jr., and B.J. Barber. Vasopressin vascular and reflex effects: a theoretical analysis. In:

- Progress in Brain Research, The Neurohypophysis: Structure, Function and Control, vol. 60. Edited by B.A. Cross and G. Leng. Amsterdam, The Netherlands: Elsevier Science Publishers, pp. 415-424, 1983.
20. Cowley, A.W. Jr., J.F. Liard, M.M. Skelton, E.W. Quillen, Jr., J.W. Osborn, Jr., and R.L. Webb. Vasopressin-neural interactions in the control of cardiovascular function. In: Vasopressin. Edited by R.W. Schrier. New York: Raven Press, pp. 1-10, 1985.
 21. Cowley, A.W. Jr. Renal function, sodium, volume and arterial pressure relationships. In: Chronic Renal Disease. Causes, Complications and Treatment. Edited by Nancy Boucot Cummings, M.D., and Saulo Klahr, M.D. New York: Plenum Medical Book Company, pp. 225-238, 1985.
 22. Cowley, A.W. Jr., and R.J. Roman. The pressure-diuresis-natriuresis mechanism in normal and hypertensive states. In: Handbook of Hypertension. Vol. 8: Pathophysiology of Hypertension - Regulatory Mechanisms. Edited by A. Zanchetti and R.C. Tarazi. Elsevier Science Publishers BV, pp. 295-314, 1986.
 23. Cowley, A.W. Jr., and J.F. Liard. Cardiovascular actions of vasopressin. In: Vasopressin: Principles and Properties. Edited by D.M. Gash and G.J. Boer. New York: Plenum Medical Book Company, pp. 389-433, 1987.
 24. Cowley, A.W. Jr., D.C. Merrill, M.J. Smith, Jr., and M.M. Skelton. Interaction of vasopressin and drinking in osmoregulation. In: Vasopressin: Cellular and Integrative Functions. Edited by A.W. Cowley, Jr., J.F. Liard, and D.A. Ausiello. New York: Raven Press, pp. 157-167, 1988.
 25. Lombard, J., A.S. Greene, A.W. Cowley, Jr., and J.F. Liard. Microcirculation in rats with volume-expanded hypertension. In: Mechanisms in Hypertension: New Aspects in Hemodynamics. Edited by L. Hansson and T. Omae. New York: Raven Press, pp. 11-20, 1989.
 26. Cowley, A.W. Jr., and R.J. Roman. Control of blood and extracellular volume. In: Clinical Endocrinology and Metabolism, Vol. 3(2), Chapter 4. London: Harcourt Brace Jovanovich Publishers, 1990; pp. 331-369.
 27. Monos, E., K. Kauser, S.J. Contney, A.W. Cowley, Jr., W.J. Stekiel. Biomechanical and electrical responses of normal and hypertensive veins to short-term pressure increases. In: Cellular Aspects of Hypertension. Edited by G. Burschi and A. Borghetti. Heidelberg: Springer-Verlag, 1991; pp. 51-57.
 28. Franchini, K.G., and A.W. Cowley, Jr. Cardiovascular: Autonomic control of cardiac function. In: Primer on the Autonomic Nervous System. American Autonomic Society, ed. Orlando, FL: Academic Press, 1996; pp.42-48.
 29. Cowley, A.W. Jr., and K.G. Franchini. Cardiovascular: Neurogenic control of blood vessels. In: Primer on the Autonomic Nervous System. American Autonomic Society, ed. Orlando, FL: Academic Press, 1996; pp. 49-55.
 30. Cowley, A.W. Jr., and R.J. Roman. Renal mechanisms in hypertension: Handbook of Hypertension. Vol. 17 Pathology of Hypertension. Edited by A. Zanchetti, and G. Moncia. Amsterdam: Elsevier Publishing Co., pp. 740-783, 1997.
 31. Cowley, A.W. Jr. Vasopressin and neuropeptide Y. In: Hypertension Primer. American Heart Association, ed. J.L. Izzo Jr. and H.R. Black. Lippincott Williams and Wilkins, Baltimore, MD, pp.38-40, 1998.
 32. Roman, R.J., D.L. Mattson, and A.W. Cowley Jr.. Measurement of regional blood flow in the kidney using laser-Doppler Flowmetry. In Methods in Molecular Medicine, vol. 51: Angiotensin Protocols. Ed. By D.H. Wang, Humana Press, Inc. Totowa, N.J., pp. 407-426, 2000.
 33. Franchini, K.G. and A.W. Cowley, Jr. Neurogenic control of blood vessels. In: Primer of the Autonomic Nervous System. American Autonomic Society, ed. D. Robertson. San Diego, CA: Elsevier Science (USA), 22. 139-143, 2004.
 34. Franchini, K.G. and A.W. Cowley, Jr. Autonomic Control of Cardiac Function. In: Primer of the Autonomic Nervous System. American Autonomic Society, ed. D. Robertson. San Diego, CA: Elsevier Science (USA), 2004.
 35. Moreno, C., H.J. Jacob, and A.W. Cowley Jr. Chapter 10: Attaching physiology to the genome. In: Handbook of Hypertension, vol. 24: Genetics of Hypertension. Ed. By W.H. Birkenhager and J.L. Reid, Elsevier Science (USA), 2007.
 36. Mattson, D.L. and A.W. Cowley, Jr. Nitric Oxide and Hypertension in Hypertension and Hormone Mechanisms (ed. by R.M. Carey) 2007.
 37. Cowley, A.W. Jr., M. Michalkiewicz. Chapter 22: Vasopressin and neuropeptide Y. In: Hypertension Primer 4th Edition. American Heart Association, ed. J.L. Izzo Jr. and H.R. Black. Lippincott Williams and Wilkins, Baltimore, MD, pp. 70-72, 2008.

Abstracts

1. Cowley, A.W. Jr., and J.C. Scott. Hemodynamic variations in the resting unanesthetized dog. *Fed. Proc.* 27(1): 631, 1968.
2. Cowley, A.W. Jr., and A.C. Guyton. Importance of heart rate for controlling cardiac output under conditions of high venous return. *Fed. Proc.* 29(2): 526, 1970.
3. Cowley, A.W. Jr., and A.C. Guyton. Short-term interrelationship between the renin-angiotensin system and arterial blood pressure. *The Physiologist* 14: 126, 1971.
4. Cowley, A.W. Jr., and A.C. Guyton. Renin-angiotensin-vasoconstrictor feedback loop for pressure control. Southeastern Dialysis Conference, 1971, pp. 8-9.
5. Brown, D.R., and A.W. Cowley, Jr. Computer analysis of continuous data collection. *J. Miss. Acad. Sci.*, 1971.
6. McCaa, R.E., C.S. McCaa, V.H. Read, A.W. Cowley, Jr., and J.D. Bower. Plasma aldosterone response to postural changes in anephric and renal transplanted patients. *Proc. Am. Soc. Nephrol.*, p. 48, 1971.
7. Coleman, T.G., A.W. Cowley, Jr., C.E. Ott, and J.D. Bower. Low cardiac output and elevated plasma renin activity in severe hypertension. *Clin. Res. (Part I)* 20: 26, 1972.
8. Cowley, A.W. Jr., and A.C. Guyton. Sensitivity to angiotensin II in sino-aortic denervated dogs. *Fed. Proc.* 31(2): 367, 1972.
9. McCaa, R.E., A.W. Cowley, Jr., C.S. McCaa, and A.C. Guyton. Return of plasma aldosterone concentration to control levels of nephrectomized-decapitated dogs. *Int. Congr. Endocrinol.*, p. 108, 1972.
10. Liard, J.F., A.W. Cowley, Jr., and A.C. Guyton. On transients of Goldblatt hypertension in unanesthetized sino-aortic baroreceptor denervated dogs. *The Physiologist* 15: 197, 1972.
11. Coleman, T.G., A.W. Cowley, Jr., C.E. Ott, and J.D. Bower. Low cardiac output and elevated plasma renin activity in severe hypertension. *Circulation (Suppl. II)* 46(4): II-81, 1972.
12. McCaa, R.E., C.S. McCaa, A.W. Cowley, Jr., C.E. Ott, V.H. Read, and A.C. Guyton. Aldosterone secretion in nephrectomized and decapitated dogs. *Circulation (Suppl. II)* 46(4): II-71, 1972.
13. Guyton, A.C., T.G. Coleman, A.W. Cowley, Jr., J.F. Liard, R.D. Manning, Jr., and R.A. Norman, Jr. Role of renal salt and water clearance in renal hypertension. Abstracts Plenary Session and Symposia, 5th Int. Congr. Nephrol. p. 48, 1972.
14. Cowley, A.W. Jr. Continuous monitoring of normal and baroreceptor denervated dogs with 24-hour daily averages and frequency distributions of hemodynamic variables. *Fed. Proc.* 32(1): 337, 1973.
15. McCaa, C.S., A.W. Cowley, Jr., V.H. Read, J.D. Bower, and R.E. McCaa. Plasma aldosterone response to postural variation in anephric man and kidney allograft recipients. *Clin. Res.* 21: 44, 1973.
16. Read, V.H., J.D. Bower, C.S. McCaa, A.W. Cowley, Jr., and R.E. McCaa. Effect of postural variation on plasma aldosterone concentration in anephric man and kidney allograft recipients. *Clin. Res.* 21: 500, 1973.
17. Cowley, A.W. Jr., R.D. Manning, Jr., and A.C. Guyton. Role of baroreceptor reflexes on hemodynamic transients of salt-loading hypertension. *Circulation (Suppl. IV)* 48(4): IV-71, 1973.
18. Cowley, A.W. Jr., and A.C. Guyton. Enhanced pressor response peculiar to vasopressin in baroreceptor denervated and areflexic dogs. *The Physiologist* 16: 290, 1973.
19. Manning, R.D. Jr., T.G. Coleman, R.A. Norman, Jr., R.E. McCaa, and A.W. Cowley, Jr. Hemodynamic transients during the onset of salt loading hypertension. *The Physiologist* 16: 387, 1973.
20. Brough, R.D. Jr., A.W. Cowley, Jr., and A.C. Guyton. Quantitative analysis of the acute response to hemorrhage of the renin-angiotensin-vasoconstrictor feedback loop in areflexic dogs. *Circulation (Suppl. IV)* 48(4): IV-70, 1973.
21. Liard, J.F., A.W. Cowley, Jr., R.E. McCaa, and A.C. Guyton. Onset of transients of Goldblatt hypertension in conscious dogs. *Circulation (Suppl. IV)* 48(4): IV-71, 1973.
22. Ott, C.E., A.W. Cowley, Jr., R.E. McCaa, C.S. McCaa, N.S. Kiron, and A.C. Guyton. Aldosterone secretion in the bilaterally nephrectomized and decapitated animal. *J. Miss. Acad. Sci.* 32, 1974.
23. Coleman, T.G., A.W. Cowley, Jr., R.A. Norman, Jr., and R.D. Manning, Jr. Pressor role of the renin-angiotensin system in one- and two-kidney Goldblatt hypertension. *Fed. Proc.* 33: 339, 1974.
24. McCaa, R.E., A.W. Cowley, Jr., A.C. Guyton, and C.S. McCaa. Aldosterone response in intact conscious dogs to chronic infusion of angiotensin II and potassium. *Proc. Am. Soc. Nephrol.*, p. 55, 1974.
25. McCaa, R.E., A.W. Cowley, Jr., A.C. Guyton, and C.S. McCaa. Aldosterone response in intact conscious dogs to chronic infusion of angiotensin II and potassium. *Kidney Int.* 6: 69A, 1974.
26. Guyton, A.C., T.G. Coleman, A.W. Cowley, Jr., J.W. DeClue, R.D. Manning, Jr., and R.A. Norman, Jr. Analysis of types of renal abnormalities that cause hypertension and those that do not. *Proc. Int. Union of Physiol. Sci.*, Vol. XI, New Delhi, India, 1974.

27. Cowley, A.W. Jr., and A.C. Guyton. Baroreceptor reflex contribution in angiotensin II (A2) induced hypertension. *Circulation (Suppl. III)* 50: III-61, 1974.
28. Cowley, A.W. Jr., and R.E. McCaa. Effects of chronic infusion of small doses of angiotensin II on aldosterone secretion. *Physiologist* 17: 201, 1974.
29. McCaa, R.E., A.W. Cowley, Jr., and C.S. McCaa. Role of angiotensin II and potassium in the long-term regulation of aldosterone secretion. (Rapid Communication). *Int. Res. Comm. Syst.* 2: 1470, 1974.
30. Barnes, G.E., A.W. Cowley, Jr., and A.C. Guyton. Effect of the sympathetic nervous system on renal function and renin release. *J. Miss. Acad. Sci.*, 1975.
31. Coleman, T.G., A.C. Guyton, A.W. Cowley, Jr., D.B. Young, J.W. DeClue, and A. Cevese. Renal abnormalities that do and do not cause hypertension. *Proc. 6th Int. Congr. Nephrol., Florence, 1975; Basel: Karger, pp. 266-273, 1976.*
32. Guyton, A.C., A.W. Cowley, Jr., D.B. Young, J.W. DeClue, R.D. Manning, Jr., R. Fagard, R.E. McCaa, and N.C. Trippodo. Synthesis of endocrine control in hypertension. *Clin. Sci. Mol. Med.* 51: 319s, 1976.
33. Lohmeier, T.E., J.O. Davis, R.H. Freeman, B.E. Watkins, W.S. Spielman, and A.W. Cowley, Jr. Mineralocorticoid activity of 18-hydroxy-deoxycorticosterone and deoxycorticosterone acetate in dogs with an aortic-caval fistula. *Fed. Proc.* 35: 400, 1976.
34. DeClue, J.W., T.G. Coleman, A.W. Cowley, Jr., R.E. McCaa, and A.C. Guyton. Influence of angiotensin II (AII) on the long-term renal excretion of sodium. *Fed. Proc.* 35: 397, 1976.
35. Lohmeier, T.E., A.W. Cowley, Jr., N.C. Trippodo, and A.C. Guyton. Natriuretic effect of angiotensin II blockade at the kidney. *The Physiologist* 19: 275, 1976.
36. DeClue, J.W., A.W. Cowley, Jr., T.G. Coleman, R.E. McCaa, and A.C. Guyton. Influence of long-term dosage infusions of angiotensin II on arterial pressure, plasma aldosterone concentration and renal sodium excretion. *The Physiologist* 19: 165, 1976.
37. Cowley, A.W. Jr., and T.E. Lohmeier. Angiotensin pressor sensitivity and sodium intake. *Circulation (Suppl. II)* 54(4): II-176, 1976.
38. Hall, J.W., A.C. Guyton, A.W. Cowley, Jr., R.E. McCaa, and C.S. McCaa. Intrarenal role of angiotensin II. *Am. Soc. Nephrol.*, 1976.
39. Smith, M.J. Jr., A.W. Cowley, Jr., R.E. McCaa, and A.C. Guyton. Chronic effects of continuous infusion of arginine vasopressin (AVP) on arterial pressure, body fluids, and electrolytes. *Fed. Proc.* 36: 437, 1977.
40. Cowley, A.W. Jr., and T.E. Lohmeier. Prolonged low dose intrarenal norepinephrine infusion: Renal function and hypertension. *Fed. Proc.* 37: 550, 1978.
41. Lohmeier, T.E., A.W. Cowley, Jr., and A.C. Guyton. Hypertensive and renal effects of chronic intrarenal infusion of angiotensin II. *Fed. Proc.* 37: 717, 1978.
42. Quillen, E.W. Jr., and A.W. Cowley, Jr. Systemic hemodynamic changes with chronic low-dose intrarenal norepinephrine infusion. *Fed. Proc.* 37: 902, 1978.
43. Lohmeier, T.E., and A.W. Cowley, Jr. Effects of vasopressin on high- and low-renin models of hypertension. *The Physiologist (Suppl.)* 21: 72, 1978.
44. Hockel, G.M., and A.W. Cowley, Jr. Chronic intrarenal and i.v. prostaglandin E2 infusion in dogs. *The Physiologist (Suppl.)* 21: 55, 1978.
45. Cowley, A.W. Jr., and S.J. Switzer. Simplified radioimmunoassay of plasma vasopressin. *The Physiologist* 21: 72, 1978.
46. Roman, R.J., A.W. Cowley, Jr., and C.P. Lechene. Clonidine-induced water diuresis: Inhibition of ADH release. *Am. Soc. Nephrol. 11th Annual Meeting: 144A, 1978.*
47. Roman, R.J., A.W. Cowley, Jr., and C.P. Lechene. Clonidine-induced water diuresis: inhibition of ADH release. *Kidney Int.* 14: 778, 1978.
48. Cowley, A.W. Jr., and S.J. Switzer. Quantitation of vasopressin pressure compensation during hemorrhage. *Am. Soc. Nephrol. 11th Annual Meeting: 59A, 1978.*
49. Cowley, A.W. Jr., M. Guinn, E.W. Quillen, and G.M. Hockel. Vasopressin and thirst response to chronic i.v. angiotensin II in dogs. *Fed. Proc.* 38: 967, 1979.
50. Smith, M.J. Jr., A.C. Guyton, A.W. Cowley, Jr., and R. Bullock. ACTH-like effect of PGE1 during direct perfusion of the isolated in situ adrenal gland in the conscious dog. *Fed. Proc.* 38: 1203, 1979.
51. Goldsmith, S., G. Francis, T.B. Levine, A.W. Cowley, Jr., and J.N. Cohn. Plasma arginine vasopressin and orthostasis in normal subjects. *Circulation* 62(4): III-135, 1980.
52. Goldsmith, S.R., G.S. Francis, T.B. Levine, A.W. Cowley, Jr., and J.N. Cohn. Elevated plasma arginine vasopressin in congestive heart failure and neurohumoral response to tilt. *Clin. Res.* 28: 710A, 1980.
53. Cowley, A.W. Jr., W.C. Cushman, E.W. Quillen Jr., M.M. Guinn, and H.G. Langford. Vasopressin in human

- essential hypertension: influence of sodium intake. *Circulation* 62(4): III-220, 1980.
54. Goldsmith, S.R., G.S. Francis, T.B. Levine, A.W. Cowley, Jr., and J.N. Cohn. Elevated arginine vasopressin levels in congestive heart failure and response to nitroprusside and captopril. *Clin. Res.* 29: 495A, 1981.
 55. Cowley, A.W. Jr., W.C. Cushman, E.W. Quillen, Jr., M.M. Guinn, and H.G. Langford. Vasopressin elevation in essential hypertension and increased responsiveness to sodium intake. Council for High Blood Pressure Research, 1980; Fourth Scientific Meeting of the Inter-American Society of Hypertension, Chile, 1981.
 56. Quillen, E.W. Jr., B.J. Barber, and A.W. Cowley, Jr. Arterial pressure telemetry system using Statham and Grass instrumentation. *Fed. Proc. (Part II)* 39(3): 973, 1980.
 57. Smith, M.J. Jr., A.C. Guyton, and A.W. Cowley, Jr. AVP both stimulates and inhibits aldosterone secretion. *Fed. Proc. (Part II)* 39(3): 1073, 1980.
 58. Switzer, S.J., M.M. Guinn, and A.W. Cowley, Jr. Effects of chronic sodium loading and depletion on plasma vasopressin concentration. *Fed. Proc. (Part II)* 39(3): 949, 1980.
 59. Reinhardt, H.W., E.W. Quillen, Jr., and A.W. Cowley, Jr. Long-term measurements of left atrial pressure in conscious moving dogs. *Fed. Proc. (Part II)* 39(3): 1085, 1980.
 60. Quillen, E.W. Jr., M.M. Skelton, and A.W. Cowley, Jr. Acute osmotic and volume control of plasma vasopressin and body fluid volume. *Fed. Proc.* 40(3): 494, 1981.
 61. Brown, D.R., D.B. Young, and A.W. Cowley, Jr. Analysis of neurogenic control of arterial pressure by sinusoidal volume changes in chloralose urethane anesthetized dogs. *Fed. Proc.* 40(3): 600, 1981.
 62. Reinhardt, H.W., E.W. Quillen, Jr., A.W. Cowley, Jr., M. Echt, R. Mohnhaupt, G. Kaczmarczyk, and B. Simgen. Left atrial pressure - a controlled variable suitable for measuring a sodium deficit. 8th Int. Congr. of Nephrol., p. 164, 1981.
 63. Goldsmith, S.T., G.S. Francis, A.W. Cowley, Jr., T.B. Levine, and J.N. Cohn. Increased plasma vasopressin in patients with congestive heart failure. *Am. Fed. Clin. Res.*, 1981.
 64. Goldsmith, S.T., G.S. Francis, A.W. Cowley, Jr., and J.N. Cohn. Reflex control of plasma arginine vasopressin and norepinephrine levels in normal man. *Circulation (Part II)* 64(4) (Suppl. IV): IV-155, 1981.
 65. Quillen, E.W. Jr., and A.W. Cowley, Jr. Adaptation of low and high pressure baroreceptor control of plasma vasopressin in dialyzed dogs. *Am. Soc. of Nephrol.*, Washington, D.C., 1981.
 66. Sias, F.R., R.J. Roman, and A.W. Cowley, Jr. Parameter sensitivity analysis of a new computer model of fluid reabsorption in the proximal tubule. *Kidney Int.* 21: 288, 1982.
 67. Roman, R.J., F.R. Sias, and A.W. Cowley, Jr. A network computer analysis of fluid reabsorption in the proximal tubule. *Kidney Int.* 21: 286, 1982.
 68. Sias, F.R., R.J. Roman, A.W. Cowley, Jr., and R.A. Johnson. A computer model of fluid reabsorption in the proximal tubule of cortical nephrons. *Fed. Proc.* 41(4): 1240, 1982.
 69. Goldsmith, S.R., G.S. Francis, A.W. Cowley, Jr., T.B. Levine, and J.N. Cohn. Hemodynamics effects and elimination of infused norepinephrine in patients with congestive heart failure. *Clin. Res.* 30: 709A, 1982.
 70. Goldsmith, S.R., G.S. Francis, A.W. Cowley, Jr., T.B. Levine, and J.N. Cohn. Increased plasma vasopressin levels in patients with congestive heart failure. *Circulation (Suppl. II)* 66: II-249, 1982.
 71. Goldsmith, S.R., A.W. Cowley, Jr., G.S. Francis, and J.N. Cohn. Effects of increased central venous and arterial pressure on plasma vasopressin in man. *Circulation* 66 (Suppl. II): 995, 1982.
 72. Merrill, D.C., A.W. Cowley, Jr., E.W. Quillen, Jr., and M.M. Skelton. Natriuresis with dehydration in salt-deplete dogs - role of vasopressin. *Fed. Proc.* 41(4): 1367, 1982.
 73. Cowley, A.W. Jr., D.C. Merrill, E.W. Quillen, Jr., and M.M. Skelton. Vasopressin enhancement of carotid baroreceptor reflex sensitivity. *Fed. Proc.* 41(4): 1116, 1982.
 74. Barber, B.J., and A.W. Cowley, Jr. A cardiovascular catalog - A structured approach to mathematical models for teaching. *Fed. Proc.* 42: 1382, 1982.
 75. Barber, B.J., D. Zawieja, and A.W. Cowley, Jr. The cardiovascular equation for multiple parallel bed systems. *Fed. Proc.* 42(4): 1130, 1983.
 76. Quillen, E.W. Jr., and A.W. Cowley, Jr. Evaluation of two factors on the osmotic control of vasopressin: BUN and renal nerves. *Fed. Proc.* 42(4): 1117, 1983.
 77. Roman, R.J., and A.W. Cowley, Jr. Impaired pressure diuresis response in spontaneously hypertensive rats. *Fed. Proc.* 42(4): 873, 1983.
 78. Goldsmith, S.R., A.W. Cowley, Jr., G.S. Francis, and J.N. Cohn. Response of plasma vasopressin to water loading in patients with congestive heart failure. *Fed. Proc.* 42(4): 2611, 1983.

79. Merrill, D.C., E.W. Quillen, Jr., M.M. Skelton, and A.W. Cowley, Jr. Dehydration natriuresis in the salt-deplete dog - Role of vasopressin and aldosterone. *Fed. Proc.* 42(4): 738, 1983.
80. Cowley, A.W. Jr., D.C. Merrill, E.W. Quillen, Jr., and M.M. Skelton. Mechanism of vasopressin (AVP) renal escape. *Fed. Proc.* 42(4): 738, 1983.
81. Goldsmith, S.R., A.W. Cowley, Jr., G.S. Francis, and J.N. Cohn. Reflex control of osmotically stimulated vasopressin in normal man. *Circulation (Suppl. III)* 68(4): III-77, 1983.
82. Goldsmith, S.R., G.S. Francis, A.W. Cowley, Jr., T.B. Levine, and J.N. Cohn. Abnormal response of plasma vasopressin to orthostatic stress in congestive heart failure. *Circulation (Suppl. III)* 68(4): III-248, 1983.
83. Ebert, T.J., A.W. Cowley, Jr., M. Skelton, and J.J. Smith. Physiologic vasopressin (AVP) infusion in man alters resting hemodynamics and reflex responses to low-level lower body negative pressure (LBNP). *Fed. Proc.* 43(4): 896, 1984.
84. Osborn, J.W. Jr., B.J. Barber, and A.W. Cowley, Jr. Neural control of the heart and peripheral circulation during acute elevations of plasma AVP in the conscious rat. *Fed. Proc.* 43(4): 896, 1984.
85. Mazzeo, A.J., J.W. Osborn, Jr., B.J. Barber, E.W. Quillen, Jr., and A.W. Cowley, Jr. A thermal dilution system for chronic measurement of cardiac output in conscious rats. *Fed. Proc.* 43(3): 731, 1984.
86. Cowley, A.W. Jr., M.M. Skelton, and O.J. Andy. Vasopressin control of plasma osmolality. *Fed. Proc.* 43(4): 993, 1984.
87. Merrill, D.C., M.M. Skelton, and A.W. Cowley, Jr. Chronic relationship between AVP and PRA in Na⁺-deplete dogs during servocontrol of body fluid control. *Fed. Proc.* 43(4): 993, 1984.
88. Manning, R.D. Jr., A.W. Cowley, Jr., and A.C. Guyton. Small sustained increases in fluid volumes produce hypertension in normal and baroreceptor denervated dogs. *Fed. Proc.* 43(3): 505, 1984.
89. Cowley, A.W. Jr., M.M. Skelton, and D.C. Merrill. Long-term influence of vasopressin on the control of arterial blood pressure independent of volume changes. *Int. Soc. of Hypertension, Interlaken, Switzerland, June 17-21, 1984.*
90. Goldsmith, S.R., A.W. Cowley, Jr., and J.N. Cohn. Lack of influence of nonosmotic factors on osmotic stimulation of vasopressin in normal humans. *Circulation* 70 (Suppl. II): II-418, 1984.
91. Goldsmith, S.R., G.S. Francis, A.W. Cowley, Jr., and J.N. Cohn. Hemodynamic effects of arginine vasopressin in patients with congestive heart failure. *Circulation* 70 (Suppl. II): II-192, 1984.
92. Goldsmith, S.R., D.L. Dodge, and A.W. Cowley, Jr. Impact of unloading cardiopulmonary receptors on the osmotic control of vasopressin in normal humans. *Circulation* 72 (Suppl. III): III-16, 1985.
93. Goldsmith, S.R., G.S. Francis, D.L. Dodge, and A.W. Cowley, Jr. Vasopressin and water excretion in human congestive heart failure. *Circulation* 72 (Suppl. III): III-1131, 1985.
94. Cowley, A.W. Jr., P. Anderas, and M. Skelton. Renal excretory responses following bilateral atrial resection in conscious dogs. (Abstract) *Inter-American Society of Hypertension, 1985.*
95. Schwartz, J., J.F. Liard, and A.W. Cowley, Jr. Cardiovascular actions of the antidiuretic activity of vasopressin. *Fed. Proc.* 44(3): 815, 1985.
96. Osborn, J.W. Jr., R.L. Webb, and A.W. Cowley, Jr. Hemodynamic and autonomic effects of arginine vasopressin (AVP) compared to angiotensin II (AII) in conscious rats. *Fed. Proc.* 44(3): 816, 1985.
97. Webb, R.L., J.W. Osborn, and A.W. Cowley, Jr. The effects of sinoaortic denervation (SAD) on the hemodynamic responses to arginine vasopressin (AVP), angiotensin II (AII), and phenylephrine (PE) in conscious rats. *Fed. Proc.* 44(3): 816, 1985.
98. Lombard, J.H., A.W. Cowley, Jr., G.J. Smits, A.J. Mazzeo, and W.J. Stekiel. Microcirculatory changes in rats in the early stages of reduced renal mass (RRM) hypertension. *Microvasc. Res.* 29(2): 236, 1985.
99. Stekiel, W.J., S.J. Contney, A. Mazzeo, A.W. Cowley, Jr., and J.H. Lombard. Evidence for elevated sympathetic neural input to small mesenteric blood vessels in volume-induced hypertension. *Microvasc. Res.* 29: 252, 1985.
100. Ebert, T.J., D.L. Eckberg, A.W. Cowley, Jr., J.M. Sprenkle, and J.P. Kampine. Arginine vasopressin augments human baroreceptor-cardiac reflex responses. *Fed. Proc.* 44(6): 1887, 1985.
101. Raff, H., D. Merrill, M. Skelton, and A.W. Cowley, Jr. Neurohypophysectomy attenuates the ACTH response to hypotension but not to CRF in conscious dogs. *Fed. Proc.* 116: 494A, 1985.
102. Cowley, A.W. Jr., and K. Nakamura. Relationship between cerebroventricular fluid osmolality and pressure and mean arterial pressure in conscious rats. *Fed. Proc.* 45(3): 185, 1986.
103. Ebert, T.J., D.U. Kreis, M.M. Skelton, and A.W. Cowley, Jr. Cardiovascular and hormonal effects of atrial natriuretic factor in conscious man. *Circulation (Suppl. II)* 74(4): II-21, 1986.
104. Merrill, D.C., A.W. Cowley, Jr., and M.M. Skelton. Chronic effects of vasopressin on fluid volume distribution in conscious dogs. *Fed. Proc.* 45(4): 904, 1986.

105. Herron, E., A. Greene, and A.W. Cowley, Jr. Early hemodynamic changes in reduced renal mass high sodium-water hypertension in conscious rats. *Fed. Proc.* 45(3): 301, 1986.
106. Yu, Z.Y., M.M. Skelton, and A.W. Cowley, Jr. Sequential changes in hemodynamic events with development of hypertension in Dahl rats. *Fed. Proc.* 45(4): 904, 1986.
107. Nakamura, K., C. Hinojosa-Laborde, and A.W. Cowley, Jr. Role of changes in cerebral spinal fluid (CSF) sodium in the development of hypertension in Dahl rats. *Fed. Proc.* 45(4): 898, 1986.
108. Nakamura, K., K. Takezawa, and A.W. Cowley, Jr. The role of sodium concentration of cerebral spinal fluid (CSF) in hypertensive change in spontaneous hypertensive rats (SHR). Presented at the International Society of Hypertension Meetings held Sept. 1-4, 1986 in Heidelberg, Germany.
109. Osborn, J.W. Jr., J.F. Liard, and A.W. Cowley, Jr. Effect of vasopressin (AVP) on pressor responses to peripheral sympathetic stimulation in the rat. *Fed. Proc.* 45(3): 187, 1986.
110. Raff, H., D. Merrill, M. Skelton, and A.W. Cowley, Jr. CRF-induced increases in vasopressin and ACTH in conscious dogs are potentiated by an osmotic stimulus. *Endocrinology* 118: 194, 1986.
111. Raff, H., D. Merrill, M. Skelton, and A.W. Cowley, Jr. Vasopressin responses to corticotropin-releasing factor in conscious dogs: glucocorticoid suppression. Abstracts of the First International Congress of Neuroendocrinology. Neuroendocrinology. Basel: S. Karger, p. 44, 1986.
112. Raff, H., D.C. Merrill, M.M. Skelton, and A.W. Cowley, Jr. Vasopressin responses to CRF in conscious dogs. *Proc. of the Int. Union of Physiol. Sci.* 16: 379, 1986.
113. Kay, J., D.T. Minkel, A.B. Gustafson, M. Skelton, A.W. Cowley, Jr., and S. Wilson. Elevated plasma vasopressin (AVP) levels during resection of pheochromocytomas. American Association of Endocrine Surgeons, 1986.
114. Monos, E., S. Contney, A.W. Cowley, Jr., and W.J. Stekiel. Effect of hemodynamic stress on membrane potential of vascular smooth muscle cells in vivo and in vitro. *Fed. Proc.* October 5-9, 1986, New Orleans.
115. Ebert, T.J., D.U. Kreis, M.M. Skelton, and A.W. Cowley, Jr. Atrial natriuretic factor (ANF) attenuates carotid baroreflex responses in conscious man. *Fed. Proc.* 46(3): 321, 1987.
116. Groban, L., T.J. Ebert, D.U. Kreis, M.M. Skelton, A.W. Cowley, Jr., and J.J. Smith. Cardiovascular effects of atrial natriuretic factor (ANF) in conscious man. *Fed. Proc.* 46(4): 1249, 1987.
117. Krieger, J.E., and A.W. Cowley, Jr. Quantitation of total volume retention and cardiac output in "fixed angiotensin II". *Fed. Proc.* 46(3): 801, 1987.
118. Merrill, D.C., M.M. Skelton, and A.W. Cowley, Jr. Angiotensin II potentiation of NaCl-induced decreases of plasma aldosterone in conscious dogs. *Fed. Proc.* 46(4): 1433, 1987.
119. Tonellato, P.J., A.S. Greene, J.H. Lombard, and A.W. Cowley, Jr. Mathematical modeling of microvessel rarefaction in the hamster cheek pouch. *Fed. Proc.* 46(4): 1543, 1987.
120. Lombard, J.H., A.S. Greene, P.J. Tonellato, and A.W. Cowley, Jr. Venular architecture in the hamster cheek pouch. *Fed. Proc.* 46(4): 1533, 1987.
121. Raff, H., M.M. Skelton, D.C. Merrill, and A.W. Cowley, Jr. Role of vasopressin in the ACTH response to hypotension in neurohypophysectomized conscious dogs. *Soc. Neurosurg.* 13(2): 1372, 1987.
122. Cowley, A.W. Jr., P.R. Anderas, and M.M. Skelton. Acute saline loading in normal and bilaterally atrial resected conscious dogs. *FASEB J.* 2(4): A306, 1988.
123. Greene, A.S., R.J. Roman, and A.W. Cowley, Jr. The role of volume expansion in the Dahl rat model of hypertension. *FASEB J.* 2(6): A1716, 1988.
124. Hinojosa-Laborde, C., A.S. Greene, and A.W. Cowley, Jr. The effect of PO₂ on whole-body autoregulation in conscious areflexic rats. *FASEB J.* 2(6): A1716, 1988.
125. Krieger, J.E., and A.W. Cowley, Jr. Role of volume retention and cardiac output in "fixed angiotensin II" salt-induced hypertension. *FASEB J.* 2(5): A1279, 1988.
126. Lewin, R.F., H. Raff, M.M. Skelton, A.W. Cowley, Jr., J.W. Findling, J.F. King, and G. Dorros. Elevated atrial natriuretic peptide levels are sustained after transluminal aortic valvuloplasty in patients with severe heart failure. *Am. Coll. Cardiol.*, 1988.
127. Merrill, D.C., T.J. Ebert, M.M. Skelton, H. Raff, J. Lemann, Jr., and A.W. Cowley, Jr. Angiotensin II sensitization of aldosterone responsiveness to plasma sodium in man. *FASEB J.* 2(5): A1322, 1988.
128. Raff, H., R.F. Lewin, M.M. Skelton, A.W. Cowley, Jr., J.W. Findling, J.F. King, and G. Dorros. Transient aortic obstruction increases atrial natriuretic peptide and vasopressin but not renin levels in patients with heart failure. *FASEB J.* 2(4): A307, 1988.
129. Skelton, M.M., J.E. Krieger, R.J. Roman, and A.W. Cowley, Jr. Blood volume expansion in "Fixed Angiotensin II" salt-induced hypertension. *FASEB J.* 2(4): A329, 1988.
130. Hanson, M.J., T.J. Ebert, D.U. Kreis, L. Groban, M.M. Skelton, and A.W. Cowley, Jr. The influence of

- physiologic infusions of atrial natriuretic factor (ANF) on renal function in humans. *FASEB J.* 2(4): A526, 1988.
131. Tonellato, P.J., A.S. Greene, J.H. Lombard, and A.W. Cowley, Jr. A mathematical model of tissue oxygen transport in an inhomogeneous medium. *FASEB J.* 2(6): A1881, 1988.
 132. Tonellato, P.J., A.S. Greene, J.H. Lombard, and A.W. Cowley, Jr. Tissue oxygen transport in experimental microvascular preparations. *FASEB J.* 2(6): A1881, 1988.
 133. Sheldahl, L.M., F.E. Tristani, T. Connelly, S.G. Levandoski, M.M. Skelton, A.W. Cowley, Jr., and R.K. Kalkoff. The effect on combined dynamic exercise and head-out water immersion of atrial natriuretic peptide. American College of Cardiology, Anaheim, California, March, 1988.
 134. Cowley, A.W. Jr. Cardiovascular influences of vasopressin in animals and man. The Society for Endocrinology, London, England, 1988.
 135. Shen, Y.T., D.R. Knight, J.X. Thomas, A.W. Cowley, Jr., and S.F. Vatner. Cardiac receptors are not the major regulators of vasopressin release during hemorrhage in conscious dogs. *Circulation (Suppl. II)* 78(4), October, 1988.
 136. Cowley, A.W., Jr., M.M. Skelton, and A.G. Brice. Further evidence supporting a novel cardiac factor in control of renal excretion in dogs. *FASEB J.* 3(4): A1001, 1989.
 137. Hinojosa-Laborde, C., and A.W. Cowley, Jr. Endothelin-neurohumoral-hemodynamic interaction in conscious rats. *FASEB J.* 3(3): A408, 1989.
 138. Raff, H., R.F. Lewin, M.M. Skelton, A.W. Cowley, Jr., J.W. Findling, J.F. King, and G. Dorros. Atrial septal puncture and mitral valve obstruction independently increase atrial natriuretic peptide in patients with congestive heart failure. *FASEB J.* 3(3): A384, 1989.
 139. Krieger, J.E., and A.W. Cowley, Jr. Hemodynamics, fluid volume and hormonal responses to chronic high salt intake in dogs. Submitted to InterAmerican Society of Hypertension on 11/21/88.
 140. Cross, R.B., A.W. Cowley, Jr., K.M. Cross, and R.J. Roman. Renal interstitial pressure in the conscious dog. *Proc. Physiol. Soc. Royal Coll. of Surg. C.* 25, p. 33P, 1989.
 141. Cowley, A.W. Jr., and R.J. Roman. Neural-hormonal control of blood volume. Submitted to XXXI ICPS for meeting July 9-14, 1989.
 142. Cowley, A.W. Jr., and M.M. Skelton. Role of plasma oncotic forces in renal responses to acute volume loading in dogs. *FASEB J.* 4(3): A564, 1989.
 143. Hinojosa-Laborde, C., and A.W. Cowley, Jr. In situ calibration of ultrasonic Doppler flow probes in rats. *FASEB J.* 4(4): A1187, 1989.
 144. Raff, H., P.E. Papanek, M.M. Skelton, and A.W. Cowley, Jr. ACTH and vasopressin responses to insulin hypoglycemia in intact and neurohypophysectomized conscious dogs. Endocrine Society, 72nd Meeting, 1990, Abstract #43.
 145. Shen, Y.-T., A.W. Cowley, Jr., and S.F. Vatner. Role of reflex control of vasopressin during hemorrhage in conscious dogs. Submitted to AHA for National Meeting, November 12-15, 1990.
 146. Groban, L., T.J. Ebert, M.M. Skelton, and A.W. Cowley, Jr. Atrial natriuretic peptide (ANP) augments forearm capillary filtration in humans. *FASEB J.* 4(3): A430, 1990.
 147. Hinojosa-Laborde, C. and A.W. Cowley, Jr. Contribution of regional vascular responses to whole body autoregulation in conscious areflexic rats. *Hypertension* 16(3): 341, 1990.
 148. Lombard, J.H., A.S. Greene, A.W. Cowley, Jr., L. Lougee, L. Watson, and F. Hansen-Smith. Structural alterations of vascular smooth muscle (VSM) cells in cremasteric microvessels of rats with reduced renal mass. *Hypertension* 16(3): 347, 1990.
 149. Cowley, A.W. Jr., and M.M. Skelton. Relative importance of neural and endocrine factors in short-term Na and H₂O excretion. *J. Hypertens.* 8 (suppl. 3): S8, June 1990.
 150. Hernandez, I., A.W. Cowley, Jr., R.J. Roman, J.H. Lombard, and A.S. Greene. Salt intake and angiotensin II alter microvessel density in the cremaster muscle of normal rats. *FASEB J.* 5(5): A1482, 1991.
 151. Lu, S.-H., R.J. Roman, D. Mattson, and A.W. Cowley, Jr. Modulation of renal medullary blood flow and its influence on sodium and water excretion in the rat. *FASEB J.* 5(5): A1040, 1991.
 152. Papanek, P.E., K.C. Bovee, M.M. Skelton, and A.W. Cowley, Jr. Characterization of the chronic pressure-natriuresis relationship in genetically hypertensive dogs. Submitted to 1991 APS Conference.
 153. Bovee, K.C., P.E. Papanek, M.M. Skelton, and A.W. Cowley, Jr. Enhanced lability of blood pressure and heart rate in the genetically hypertensive dog. *Hypertension* 18(3): 398, 1991.
 154. Mattson, D.L., R.J. Roman, and A.W. Cowley, Jr. Role of nitric oxide (NO) on renal juxtamedullary blood flow and sodium excretion. *Hypertension* 18(3): 415, 1991.
 155. Greene, A.S., F. Hansen-Smith, W.J. Stekiel, S.J. Contney, A.W. Cowley, Jr., and J.H. Lombard. Rapid microvessel rarefaction and vascular smooth muscle depolarization in reduced renal mass hypertension

- and high salt intake. Submitted to Hypertension, 1991.
156. Lombard, J.H., A.S. Greene, A.W. Cowley, J. Morris, and F. Hansen-Smith. Structural bases for microvascular rarefaction in cremaster muscle during acute reduced renal mass (RRM) hypertension and high salt intake. Submitted to Hypertension, 1991.
 157. Cowley, A.W. Jr., R.J. Roman, and J.E. Krieger. Pathways linking renal excretion and arterial pressure. Submitted to Inter-American Society of Hypertension, 1991.
 158. Hinojosa-Laborde, C., B.H. Frohlich, and A.W. Cowley, Jr. Whole body autoregulation in reduced renal mass hypertension. *Hypertension* 18(3): 416, 1991.
 159. Hansen-Smith, F., J.H. Lombard, A.S. Greene, A.W. Cowley, Jr., and L. Morris. Structural bases for microvascular rarefaction in cremaster muscle during acute reduced renal mass (RRM) hypertension and high-salt intake. *FASEB J.* 6(4): A2074, 1992.
 160. Monos, E., S.J. Contney, A.W. Cowley, Jr., and W.J. Stekiel. Axial extension of vein induces endothelium dependent cell membrane hyperpolarization in the smooth muscle in vivo. Abstracts of the Joint Meeting of the Deutsche Physiologische Gesellschaft (71st meeting) with the Nederlandse Vereniging voor Fysiologie, 4-7 March 1992, Düsseldorf.
 161. Mattson, D.L., S.-H. Lu, K. Nakanishi, and A.W. Cowley, Jr. Effect of chronic renal medullary interstitial infusion of L-NAME on renal blood flow distribution and mean arterial pressure. *FASEB Summer Research Conference: Renal Mechanisms*, Saxtons River, VT, July, 1992.
 162. Papanek, P.E., A.W. Cowley, Jr., G.M. Schmitt, and H. Raff. Effect of hypotension and hyperosmolality on vasopressin and ACTH responses to hypoglycemia in conscious dogs. *FASEB J.* 6(4): A1460, 1992.
 163. Mattson, D.L., and A.W. Cowley, Jr. Kinin actions on papillary blood flow and renal excretory function. *Hypertension* 20(3): 402, 1992.
 164. Cowley, A.W., Jr., M.M. Skelton, P.E. Papanek, and A.S. Greene. Alternate pathways to hypertension in reduced renal mass rats receiving high salt (volume versus vasoconstriction). *FASEB J.* 7(3): A533, 1993.
 165. Lu, S.-H., D.L. Mattson, and A.W. Cowley, Jr. Assessment of changes in intrarenal blood flow in conscious rat using implanted fiber optic probes and laser-Doppler flowmetry. *FASEB J.* 7(3): A324, 1993.
 166. Mattson, D.L., S.-H. Lu, K. Nakanishi, P.E. Papanek, and A.W. Cowley, Jr. Effect of chronic renal medullary interstitial infusion of NG-nitro-L-arginine methyl ester (L-NAME) on renal blood flow distribution and MAP. *FASEB J.* 7(3): 548, 1993.
 167. Muirhead, E.E., A.-P. Zou, D. Mattson, A.W. Cowley, Jr., and R.J. Roman. Changes in renal hemodynamics after reversal of 1K,1C-hypertension. *FASEB J.* 7(3): A7, 1993.
 168. Osborn, J.L., M. Nobrega, E. Gordin, and A.W. Cowley, Jr. Selective adrenergic mediation of juxtamedullary blood flow in anesthetized rats. *FASEB J.* 7(3): A309, 1993.
 169. Stepniakowski, K., E. Szczepanska-Sadowska, A.W. Cowley, Jr., and M.M. Skelton. Sustained hypertension elicited by stimulation of vasopressin V1 receptors. *FASEB J.* 7(3): 653, 1993.
 170. Szczepanska-Sadowska, E., K. Stepniakowski, and A.W. Cowley, Jr. Hypertension elicited by stimulation of vasopressin V1 receptors is related to intrarenal actions. *FASEB J.* 7(3): A654, 1993.
 171. Raff, H., P.E. Papanek, J.-F. Liard, and A.W. Cowley, Jr. Intracarotid vasopressin infusion normalizes the ACTH response to hypotension in neurohypophysectomized, conscious dogs. *Soc. Neurosci. Abstr.* 19: 415, 1993.
 172. Lu, S., D.L. Mattson, and A.W. Cowley, Jr. Effect of chronic renal medullary interstitial infusion of captopril on intrarenal blood flow distribution and arterial pressure in SHR. *Hypertension* 22(3): 414, 1993.
 173. Nakanishi, K., D.L. Mattson, V. Gross, and A.W. Cowley, Jr. Attenuation of vasopressin vasoconstrictor action by V2 receptor stimulation in the renal medullary circulation. *Hypertension* 22(3): 445, 1993.
 174. Cowley, A.W. Jr. Role of venous system in short- and long-term control of blood volume and cardiac output. *European Congress of the International Union of Phlebology*, Budapest, Hungary, September, 1993 (Submitted).
 175. Monos, E., S.J. Contney, G. Dörnyei, A.W. Cowley, Jr., Z. Bosnjak, and W.J. Stekiel. Vascular smooth muscle responses to axial stretch. *IUPS*, Glasgow, U.K., 1-6 August 1993 (Submitted).
 176. Gross, V., D.L. Mattson, M.M. Skelton, and A.W. Cowley, Jr. High salt intake increases renal cortical but not medullary blood flow in conscious rats. *FASEB J.* 8 (5, pt. 2): A870 (abstract), 1994.
 177. Ledderhos, C., D.L. Mattson, M.M. Skelton and A.W. Cowley, Jr. Diuresis with selective stimulation of renal medullary vasopressin V1 receptors in rats. *FASEB J.* 8: A551, 1994.
 178. Mattson, D.L., K. Nakanishi, and A.W. Cowley, Jr. Effect of chronic nitric oxide inhibition on renal blood flow, sodium balance, and blood pressure. *FASEB J.* 8: A76, 1994.

179. Gordin, E., A.W. Cowley, Jr. and J.L. Osborn. Chronic measurement of renal cortical and medullary blood flow using laser-Doppler flowmetry in conscious dogs. *FASEB J.* 8: A582, 1994.
180. Roberts, L.A., D.L. Mattson and A.W. Cowley, Jr. Quantitative structural relationships in the medulla of the rat kidney. American Heart Association, 67th Scientific Sessions, November 14-17, 1994, Dallas, TX. Proceedings.
181. Nagrani, N.K., D. Mattson, A. Jesmanowicz, A.S. Greene, A.W. Cowley, Jr., and J.S. Hyde. In vivo high resolution echo planar imaging of rat kidney. Society for Magnetic Resonance, 2nd Meeting, August 6-12, 1994, San Francisco, CA. Proceedings, p. 1019, 1994.
182. Cowley, A.W. Jr. Physical factors and renal excretion -- Role in blood volume regulation. American Physiological Society Intersociety Meeting, October 29 - November 2, 1994, San Diego, CA. Proceedings.
183. Park, F., D.L. Mattson, N.J. Alkayed, K.G. Franchini, R.J. Roman, A.W. Cowley, Jr. Identification of vasopressin V1a and V2 receptors in the renal microcirculation. *FASEB J.* 9: A264, 1995.
184. Franchini, K.G., and A.W. Cowley, Jr. Renal cortical and medullary blood flow responses during water restriction: Role of vasopressin. *FASEB J.* 9: A6, 1995.
185. Herzig, T.C., J.D. Molkentin, B.E. Markham and A.W. Cowley, Jr. Activity of the angiotensin type 1 (AT-1) receptor promoter in normotensive and aortic coarcted rats is altered by mutation of the AP-1 binding site. *FASEB J.*, 9: A128, 1995.
186. Roman, R.J., A.W. Cowley, Jr., and D. Mattson. Renal medullary mechanisms in hypertension. The American Society of Hypertension, 1995 (Submitted).
187. Zou, A.-P., and A.W. Cowley, Jr. Role of renal medullary adenosine in the control of blood flow and sodium excretion. *FASEB J.*, 10: A565, 1996.
188. Mattson, D.L., R.J. Roman, M.M. Skelton, L. Henderson, T.G. Bellehumeur, and A.W. Cowley, Jr. Renal medullary nitric oxide synthase activity in rats on low and high salt diets. *FASEB J.*, 10: A565, 1996.
189. Park, F. and A.W. Cowley, Jr. Expression of oxytocin receptors in the renal cortical and medullary circulation. *FASEB J.* 10: A575, 1996.
190. Tonellato, P.J., C.M. Kendzierski, T. Kurth, R.J. Roman, and A.W. Cowley, Jr. Blood pressure related quantitative traits of a hypertensive rat population. *FASEB J.* 10: A633, 1996.
191. Franchini, K.G., and A.W. Cowley, Jr. Influence of physiological levels of vasopressin on the pressure-diuresis relationship in rats. *Hypertension*, 26: 572, 1995.
192. Herzig, T.C., J.D. Molkentin, B.E. Markham, and A.W. Cowley, Jr. AP-1 and GATA sites in the angiotensin type 1 (AT1) receptor promoter regulate activity in aortic coarctation induced cardiac hypertrophy. *Hypertension*, 26: 546, 1995.
193. Simon, J.S., R.J. Roman, A.W. Cowley, Jr., A.S. Greene, and H.J. Jacob. Rat alpha-2 adrenergic receptor class III is linked to systolic blood pressure after salt-load in genetic hypertension. *Hypertension* 26: 537, 1995.
194. Hope, W.G., V.E. Laubach, E.G. Shesely, and A.W. Cowley, Jr. Effect of inducible nitric oxide synthase gene knockout on the pressure-natriuresis relationship in mice. *FASEB J.* 11: A27, 1997.
195. Wu, F., O. Ito, P.L. Li, R.J. Roman, A.P. Zou, and A.W. Cowley, Jr. Microassay of 5' nucleotidase and adenosine deaminase in microdissected nephron segments of rats. *FASEB J.* 11: A84, 1997.
196. Zou, A.P., K. Nithipatikom, P.L. Li, R.J. Roman and A.W. Cowley, Jr. Altered renal adenosine metabolism and glomerular hypertension in Dahl S/Jr rats. *FASEB J.* 11: A84, 1997.
197. Cowley, A.W., Jr., M.M. Skelton, and T. Kurth. Long-term vasopressin effects on medullary blood flow and arterial blood pressure. *FASEB J.* 11: A218, 1997.
198. Mattson, D.L., F. Park, W.G. Hope and A.W. Cowley, Jr. Chronic L-NAME and blood pressure in conscious mice. *FASEB J.* 11: A259, 1997.
199. Park, F., D.L. Mattson, L. Roberts and A.W. Cowley, Jr. Evidence for the presence of contractile elements in rat renal medullary vasa recta capillaries. *FASEB J.* 11: A267, 1997.
200. Roberts, L.A., D.L. Mattson, and A.W. Cowley, Jr. Quantitative branching pattern of blood vessels in the outer medulla. *FASEB J.* 11: A267, 1997.
201. Koike, G., H.J. Jacob, A.W. Cowley, Jr., V.J. Dzau, D. Fanestil, M.R. Grigor, S.B. Harrap, E.L. Harris, E.M. Krieger, J.E. Krieger, E.S. Lander, M.P. Printz, A. Provoost, R.J. Roman, N.J. Samani, J. Sassard, N.J. Schork, M. Vincent. The comprehensive total genome scan to map genes responsible for high blood pressure in the rat. *FASEB J.* 11: A468, 1997.
202. Zou, A. P., F. Wu and A.W. Cowley, Jr. Protective effect of angiotensin II-induced increase in nitric oxide in the renal medullary circulation. *Hypertension* 30(3): 474, 1997.
203. Miyata, N., A.P. Zou, D.L. Mattson and A.W. Cowley, Jr. Renal medullary interstitial infusion of

- L-arginine prevents hypertension in Dahl salt-sensitive rats. *Hypertension* 30(3): 481, 1997.
204. Park, F., G. Koike and A.W. Cowley, Jr. Differential time-dependent changes of the vasopressin V2 receptor mRNA and protein in the rat kidney during dehydration. *Journal of the American Society of Nephrology*, in press, 1997.
 205. Park, F., A.P. Zou and A.W. Cowley, Jr. Vasopressin-mediated stimulation of nitric oxide in the rat renal medulla. *FASEB J.* 12: A53, 1998.
 206. Wu, F., A.W. Cowley, Jr. and D.L. Mattson. Nitric oxide synthase (NOS) activity in microdissected segments of the Sprague Dawley rat kidney. *FASEB J.* 12: A53, 1998.
 207. Zou, A.P., N. Su, F. Park, P.L. Li and A.W. Cowley, Jr. Expression of hypoxia-inducible factor-1 in renal cortical and medullary tissue and dissected tubules in rats. *FASEB J.* 12: A684, 1998.
 208. Cowley, A.W., Jr. and A.P. Zou. Increased NO production modulates adrenergic response of renal medullary circulation in rats. *FASEB J.* 12: A53, 1998.
 209. Tonellato, P.J., A. Wang, F. Wang, C.M. Kendzioriski, H.J. Jacob, and A.W. Cowley, Jr. Web-base system for the molecular genetics of hypertension. *FASEB J.* 12: A359, 1998.
 210. Kendzioriski, C.M., A.W. Cowley, Jr., A.S. Greene, H.J. Jacob, and P.J. Tonellato. Identifying physiologically informative quantitative trait loci: a model based approach. *FASEB J.* 12: A360, 1998.
 211. Cowley, A.W., Jr., D.L. Mattson, and A-P Zou. Nitric oxide protection of the renal medullary circulation from Tigerstedt's "Internal Secretory Factor". *Pathophysiology* 5(S1): 53, 1998.
 212. Cowley, A.W., Jr., R. J. Roman, A. Greene, P. Tonellato, and H. Jacob. Chromosomal pattern of quantitative trait loci in the Brown Norway and Dahl S intercross. *Physiological Research* 47 (5): 36P, 1998.
 213. Szentiványi, M. Jr., C.Y. Maeda, and A.W. Cowley, Jr. Local renal medullary L-NAME infusion enhances the effect of chronic angiotensin II treatment. *Hypertension* 32(3): 601, 1999.
 214. Miyata, N. and A.W. Cowley, Jr. Renal intramedullary infusion of L-arginine prevents reduction of medullary blood flow in Dahl salt-sensitive rats. *Hypertension* 32(3): 616, 1999.
 215. Kita, Y., G.D. McQuestion, D.H. Eick, H.J. Jacob, P.J. Tonellato, A.W. Cowley, Jr. and A.S. Greene. Massively parallel analysis of gene expression using cDNA microarrays. *FASEB J.* 13(4): A381, 1999.
 216. Cowley, A.W., Jr., H.J. Jacob, R.J. Roman, A.S. Greene, M.L. Kaldunski, M. Stoll, and P.J. Tonellato. Genetic and phenotypic differences of Dahl S/mcw and Brown Norway/mcw inbred rats. *FASEB J.* 13(4): A380, 1999.
 217. Cowley, A.W., Jr., R.J. Roman, A.S. Greene, H.J. Jacob, and M.L. Kaldunski. Renal phenotypic and gender differences between DahlS/mcw and Brown Norway/MCW rats. *FASEB J.* 13(4): A380, 1999.
 218. Szentivanyi, M., A.P. Zou, and A.W. Cowley, Jr. Hypertensive effects of angiotensin II in Dahl S rats is enhanced by reduced responsiveness of the renal medullary NO system. *FASEB J.* 13(4): A783, 1999.
 219. Szentivanyi, M., C.Y. Maeda, and A.W. Cowley, Jr. Role of renal medullary NO concentration in counteracting the chronic hypertensive effects of arginine vasopressin. *FASEB J.* 13(4): A783, 1999.
 220. Skelton, M.M., F. Park, D.L. Mattson, and A.W. Cowley, Jr. Changes in steady state levels of nitric oxide synthase isoforms in renal cortex and medulla associated with chronic infusion of arginine vasopressin. *FASEB J.* 13(4): A1069, 1999.
 221. Alonso-Galicia, A.S. Greene, T.M. Kurth, A.W. Cowley, Jr. and R.J. Roman. 20-HETE contributes to the renal vasoconstrictor actions of angiotensin II. *FASEB J.* 13(4): A389, 1999.
 222. Runte, M.L., N.L. Johnson, M.A. Granados, R.J. Roman, A.W. Cowley, Jr., and J.H. Jacob. Consomic rats for determining genes and their function. *FASEB J.* 13(4): A379, 1999.
 223. Stoll, M., A.W. Cowley, Jr., S.B. Harrap, E.L. Harris, J.E. Krieger, A. Kwitek-Black, M.P. Printz, A.P. Provoost, J. Sassard and H.J. Jacob. Comparative genomics yields targets for human hypertension. *Hypertension* 34(2): 349, 1999.
 224. Cowley, A.W., Jr., M. Stoll, M.L. Kaldunski, T.M. Kurth, A.S. Greene, and R.J. Roman. Genomic scan analysis reveals QTLs on chromosomes 2 and 18 for salt-sensitivity of blood pressure in Brown Norway and Dahl S rat F2 intercross. *Hypertension* 34(2): 333, 1999.
 225. Kotchen, T.A., A.W. Piering, K. Bell, A.W. Cowley, Jr., C.E. Grim, D. Gaudet, P. Hamet, M. Kaldunski, J.M. Kotchen, and R.J. Roman. Glomerular hyperfiltration in hypertensive African Americans. *Hypertension* 34(2): 334, 1999.
 226. Szentivanyi, M. Jr., C.Y. Maeda, A-P. Zou, and A.W. Cowley, Jr. Renal medullary alpha-2 receptor mediated increase in NOS activity protects from norepinehrine-induced hypertension. *Hypertension* 34(2): 360, 1999.
 227. Zou, A-P, H. Billington, N. Su, A.W. Cowley, Jr. Inhibition of heme oxygenase reduces renal medullary blood flow in rats. *Hypertension* 34(2): 366, 1999.

228. Yuan, B. and A.W. Cowley, Jr. Evidence that reduced renal medullary NOS activity of DahlS rats enables small elevations of AVP to produce sustained hypertension. *Hypertension* 36(4): 682, 2000.
229. Zou, A-P, N. Li, and A.W. Cowley, Jr. Production and actions of superoxide in the renal medulla. *Hypertension* 36(4): 711, 2000.
230. Cowley, Jr., A.W., R.J. Roman, M.L. Kaldunski, P.J. Tonellato, P. Dumas, A.S. Greene, and H.J. Jacob. Transfer of Brown Norway rat chromosome 13 into Dahl S genomic background confers protection from high salt diet. *Hypertension* 36(4): 717, 2000.
231. Gossard, F., Z. Pausova, B. Deslauriers, T.A. Kotchen, A.W. Cowley, Jr., D. Gaudet, J. Trembly, and P. Hamet. Heritability of hear rate upon stimulation in member of families with history of hypertension. *Hypertension* 36(4): 718, 2000.
232. Kaldunski, M.L., K. Bork, M. Stoll, H.J. Jacob, R.J. Roman, A.S. Greene, and A.W. Cowley, Jr. Genetic linkage of blood pressure responsiveness to an alerting stimulus defined in an F2 population derived from Brown Norway and Dahl SS rat intercross. *FASEB J.* 14(4): A52, 2000.
233. Roman, R.J., A.S. Greene, M. Stoll, M.L. Kaldunski, P.J. Tonellato, H.J. Jacob, and A.W. Cowley, Jr., Quantitative trait loci (QTLs) contributing to development of glomerulosclerosis in Dahl rats. *FASEB J.* 14(4): A52, 2000.
234. Greene, A.S., A.W. Cowley, Jr., M. Stoll, M.L. Kaldunski, R.J. Roman, P.J. Tonellato, N.J. Shork, and H.J. Jacob. Genetic components of vascular sensitivity defined within a population of F2 rats from a Brown Norway and Dahl S derived intercross. *FASEB J.* 14(4): A95, 2000.
235. Zou, A.P., Z.Z. Yang, and A.W. Cowley, Jr. Role of superoxide in the control of renal medullary blood flow. *FASEB J.* 14(4): A130, 2000.
236. Dickhout, J., M.L. Kaldunski, and A.W. Cowley, Jr. Confocal image reconstruction reveals reduced glomerular capillary lumen volume associated with lower GFR in DS rats. *FASEB J.* 14(4): A133, 2000.
237. Papanek, P.E., M. Hodges, H.V. Forster, H.J. Jacob, and A.W. Cowley, Jr. Differences in ventilatory responses to graded exercise among inbred strains of adult rats. *FASEB J.* 14(4): A640, 2000.
238. Hodges, M., H.V. Forster, A.W. Cowley, Jr., H.J. Jacob, R. Schmidt, and A.P. Provoost. Differences in ventilatory response to hypoxia and hypercapnia among inbred strains of adult rats. *FASEB J.* 14(4): A640, 2000.
239. Szentivanyi, M.J., M. Skelton, and A.W. Cowley, Jr. Medullary L-Arginine administration prevents exaggerated sensitivity to the hypertensive effects of angiotensin II in Dahl salt-sensitive rats. *FASEB J.* 14(4): A678, 2000.
240. Karau, K., R. Johnson, R. Molthen, A. Provoost, A.W. Cowley, Jr., H. Jacob, and C. Dawson. Pulmonary arterial remodeling in the fawn hooded rat revealed by microfocal x-ray tomography (CT). *FASEB J.* 14(4): A711, 2000.
241. Yuan, B., P. Soares, and A.W. Cowley, Jr. Small elevations of plasma arginine vasopressin cause down regulation of vasopressin V2 receptors in the outer medulla of the kidney in Sprague-Dawley rats. *FASEB J.* 15(4): A134, 2001.
242. Takefumi, M., B. Yuan, A.P. Zou, and A.W. Cowley, Jr. Expression of VACM-1 in the vasa recta of the renal medulla. *FASEB J.* 15(4): A134, 2001.
243. Hodges, M.R., H.V. Forster, A.W. Cowley, Jr., H.J. Jacob, A.P. Provoost, and R. Schmidt. Phenotypic differences of augmented breaths during hypoxia or hypercapnia among three inbred strains of rats. *FASEB J.* 15(4): A423, 2001.
244. Dickhout, J.G., M.L. Kaldunski, and A. W. Cowley, Jr. Glomerular insufficiency limits clearance in Dahl salt sensitive rats. *FASEB J.* 15(4): A448, 2001.
245. Dumas, P., M. Kaldunski, M. Stoll, P.J. Tonellato, A.S. Greene, R.J. Roman, A.W. Cowley, Jr., and H.J. Jacob. Sexual dimorphism of hypertension-related phenotypes in a F2 cross: mapping of sex-specific quantitative trait LOCI (QTL). *FASEB J.* 15(4): A486, 2001.
246. Yuan, B., P. Soares, and A.W. Cowley, Jr. Intravenous infusion of subpressor dose of arginine vasopressin causes an increase in eNOS mRNA expression in Brown Norway but not Dahl S rats. *FASEB J.* 15(5): A775, 2001.
247. Makino, A., L. Kelly, and A.W. Cowley, Jr. Hypertension results from increased free radical production in the renal medulla of rats. *FASEB J.* 15(5): A784, 2001.
248. Zou, A.P., Z.Z. Yang, and A.W. Cowley, Jr. Normalization of increased NADH oxidase expression in young Dahl S rat kidney by introgression of Chromosome 13 from Brown Norway rats. *FASEB J.* 15(5): A784, 2001.
249. Mori T., J.G. Dickhout, and A. W. Cowley, Jr. Buffering of AVP hypertensive action by Ca²⁺ mediated

- nitric oxide production in inner medullary collecting duct. *Hypertension* 38(3): 476, 2001.
250. Liang, M. E. Rute, B. Yuan, A.S. Greene, A.P. Zou, P. Soares, G. McQuestion, G. R. Slocum, H. J. Jacob, A. W. Cowley, Jr. Chromosomal substitution and cDNA microarray analysis identify renal medullary genes associated with salt-sensitive hypertension. *Hypertension* 38(3): 481, 2001.
 251. Cowley, A. W. Jr, A. Makino, and A.P. Zou. Hypertensive effects of renal medullary elevation of reactive oxygen species (ROS). *Hypertension* 38(3): 522, 2001.
 252. Zou, A.P., A.A. Yang, B. Yuan, and A.W. Cowley, Jr. Heme oxygenases and hypoxia-induced molecular adaptation in the renal medulla. *Hypertension* 38(3): 523, 2001.
 253. Yuan, B., Z. Wang, M. Liang, E. Rute, A.P. Zou, G. Slocum, A.S. Greene, and A.W. Cowley, Jr. Effects of chronic elevations of angiotensin II on gene expressions in renal medulla of sprague-dawley rats using cDNA microarrays. *FASEB J.* 16(4): A415, 2002.
 254. Mattson, D.L., M.P. Kunert, M.C. Bregantini, R.J. Roman, A.W. Cowley, Jr. Chromosomal substitution reveals genes of hypertension and renal disease on chromosomes 13 and/or 16 of the dahl SS (ss/Mcw) rat. *FASEB J.* 16(4): A416, 2004.
 255. Hagemeyer, R., K. Maier, R. Klum, L. Henderson, M.M. Skelton, A.W. Cowley, Jr., and R.J. Roman. HPLC assay for the measurement of biopterin levels: an index of oxidative stress. *FASEB J.* 16(4): A429, 2002.
 256. Makino, A., A.P. Zou, and A.W. Cowley, Jr. Reduction of medullary oxidative stress in dahl salt-sensitive rats by substitution of brown norway rat chromosome 13 (Consomic SS.BN13). *FASEB J.* 16(4): A429, 2002.
 257. Zou, A.P., Y.F. Chen, A.W. Cowley, Jr. Increased H₂O₂ counteracts the vasodilator and natriuretic effects of renal medullary infusion of tempol. *FASEB J.* 16(4): A432, 2002.
 258. Chen, Y.F., J.L. Spurrier, P.L. Li, A.W. Cowley, Jr. NADH Oxiadase-mediated production of superoxide in the renal thick ascending limb in response to hypoxia. *FASEB J.* 16(4): A432, 2002.
 259. Yuan, B., P. Soares, and A.W. Cowley, Jr. Vasopressin V₂ receptor mRNA in the renal medulla after chronic intravenous infusion of arginine vasopression in dahl salt-sensitive and brown norway rats. *FASEB J.* 16(5): A793, 2002.
 260. Kaldunski, M.L., D.L. Mattson, G.M. Tadisich, M. Bregantini, M.P. Kunert, P. Dumas, S. Jene, H.J. Jacob, and A.W. Cowley, Jr. Brown Norway chromosome 18 substitution into dahl salt-sensitive rats (Consomic SS.BN18) reduces salt-induced hypertension. *FASEB J.* 16(5): A820, 2002.
 261. Kunert, M.P., D.L. Mattson, M. Bregantini, A.W. Cowley, Jr. Gender specific differences in response to norepinephrine and angiotensin II in dahl s and brown Norway rats. *FASEB J.* 16(5): A821, 2002.
 262. Zou, A.P., Y.F. Chen, A.W. Cowley, Jr. Effects of endogenous and exogenous ONOO⁻ on renal medullary blood flow in anesthetized rats. *FASEB J.* 16(5): A838, 2002.
 263. Dickhout, J., T. Mori, and A.W. Cowley, Jr. Calcium, nitric oxide (NO) and superoxide responses of outer medullary vasa recta to angiotensin II (AII). *FASEB J.* 16(5): A851, 2002.
 264. Dwinell, M.R., H.V. Forster, M. Hodges, A.W. Cowley, Jr., H.J. Jacob. Hypercapnic ventilatory responses in inbred parental and consomic strains of adult rats. *FASEB J.* 16(5): A879, 2002.
 265. Liang, M., B. Yuan, E. Rute, A.S. Greene, and A.W. Cowley, Jr. Mechanisms of Dahl salt-sensitive hypertension revealed by temporal patterns of renal medullary gene expression. *Hypertension.* 40(3):384, 2002.
 266. Mori, T. and A.W. Cowley, Jr. Role of Pressure in AngII-induced renal medullary injury using chronic servo-control of renal perfusion pressure. *Hypertension* 40(3):399, 2002.
 267. Moreno, C., P. Dumas, M. Stoll, A.S. Greene, M.L. Kaldunski, R.J. Roman, P.J. Tonellato, Z. Wang, H.J. Jacob, and A.W. Cowley, Jr. Gender differences in the genetic determinants of hypertension. *Hypertension.* 40(3):383, 2002.
 268. Amaral, S.L., M. Liang, E. Rute, A.W. Cowley, Jr., and A.S. Greene. CDNA microarray analysis of gene expression in skeletal muscle angiogenesis after chromosomal substitution in Dahl S rats. *Hypertension.* 40(3):396, 2002.
 269. Zou, A.P., Y.F. Chen, Z.Z. Yang, and A.W. Cowley, Jr. Hyperhomocysteinemia associated with decreased renal transulphuration activity in Dahl S rats. *Hypertension.* 40(3):425, 2002.
 270. Dwinell, M.R., H.B. Forster, A.W. Cowley, JR., and H.J. Jacob. Hypoxic ventilatory responses are influenced by diet in Dahl salt-sensitive (SS/Mcw), SS-13BN/Mcw and SS-16BN/Mcw consomic rats. *FASEB J.* 17(5):A15, 2003.
 271. Zou, A.P., F-Y Yi, P-L Li, and A.W. Cowley, Jr. Activation of NADH oxidase by outward movements of H⁺ ions in renal medullary thick ascending limb of Henle. *FASEB J.* 17(3): A490, 2003.
 272. Mori T, A.P. Zou, and A.W. Cowley, Jr. Superoxide stimulated by angiotensin II via NAD(P)H oxidase

- modifies tubular-vascular nitric oxide cross-talk in renal outer medullary vascular bundle. *FASEB J.* 17(3): A490, 2003.
273. Feng X, H. Kiang, X. Dong, A.W. Cowley, Jr, and P.J. Tonellato. Segregation of informative phenotypes of inbred rats by a fuzzy neural network method. *FASEB J.* 17(3): A557, 2003.
274. Chen Y.F., A.W. Cowley, Jr., and A.P. Zou. Oxygen sensitivity and antihypertensive action of heme oxygenase-1 in the renal medulla. *FASEB J.* 17(3): A1233, 2003
275. Mattson D.L., M.P. Kunert, M.L. Kaldunski, R.J. Roman, and A.W. Cowley, Jr. Parental and developmental influence of purified or grain based diets on hypertension and renal disease in Dahl salt-sensitive (SS/Mcw) rats. *FASEB J.* 17(3): A932, 2003.
276. Taylor, N. and A.W. Cowley, Jr. Role of H₂O₂ in the maintenance of salt-induced hypertension in the Dahl salt-sensitive rat. *The Physiologist*, 46(4):241-242, 2003.
277. Mattson D., M.P. Kunert, R.J. Roman, A.W. Cowley, Jr. Substitution of chromosome Y attenuates hypertension and renal disease in the Dahl salt-sensitive (SS/Mcw) rat. *FASEB J.* 18(4):A298, 2004.
278. Liang, M., G. Tadish, M. Skelton, J. Kolinski, M. Kaldunski, A.W. Cowley, Jr. Substitution of chromosomes 13 or 18, but not 20, of Brown Norway rats into Dahl S ameliorates salt-induced hypertension and proteinuria: A time course study. *FASEB J.* 18(4): A300, 2004.
279. Moreno, C., P. Khamphang, D. Schippers, J. Lazar, M.L. Kaldunski, A.S. Greene, R.J. Roman, A.E. Kwitek, H.J. Jacob, A.W. Cowley, Jr. Renal expression and sequence comparison of cyclooxygenase 2 in salt-sensitive hypertension. *FASEB J.* 8(4): A301, 2004.
280. Dwinell, M.R., H.V. Forster, A.W. Cowley, Jr., H.J. Jacob. Hypoxic and hypercapnic ventilatory responses in parental and consomic rats are influenced by gender and genetics. *FASEB J.* 8(5): A1272, 2004.
281. Mori, T., M. Abe, A.W. Cowley, Jr. Enhanced renal outer medullary stress reduces angiotensin II-induced tubulo-vascular nitric oxide cross-talk in Dahl salt-sensitive rats. *FASEB J.* 8(5): A1322, 2004.
282. Taylor, N., M. Liang, A.W. Cowley, Jr. Rescue of salt-sensitive hypertensive trait in consomic SSBN13 rats by elevations of renal medullary H₂O₂. *FASEB J.* 8(5): A1322, 2004.
283. Mori, T. and A. W. Cowley, Jr. Superoxide increases vasa recta pericyte Ca²⁺ levels by actions of hydrogen peroxide in the renal outer medulla. *Hypertension* 44: 549, 2004.
284. Taylor, N. and A. W. Cowley, Jr. Mechanism of NOS uncoupling in the renal medulla of Dahl S rats. *Hypertension* 44: 549, 2004.
285. Abe, M., M.M. Skelton, and A.W. Cowley, Jr. Evidence that renal medullary COX-2 attenuates salt-induced hypertension in Dahl salt-sensitive rats. *FASEB J.* 19(5): A1069, 2005.
286. Taylor, N.E., G. Tadish-Rhodes, T. Kurth, M. M. Skelton, A. W. Cowley, Jr. Pressure directly induces oxidative stress in the renal medulla of Sprague Dawley rats with blunted nitric oxide. *FASEB J.* 19(5): A1588, 2005.
287. Mattson D.L., M.P. Kunert, R.J. Roman, H.J. Jacob, and A.W. Cowley, Jr. Chromosome 1 substitution ameliorates L-NAME hypertension and renal disease in male and female FHH (Fawn Hooded Hypertensive) rats. *FASEB J.* 19(5): A578, 2005.
288. Grim CD, Kotchen JM, Krishnaswami S, Gaudet D, Hamet P, Kaldunski ML, Pausova Z, Roman RJ, Tremblay J, Cowley AW Jr, Kotchen TA. Ethnic differences in the relative contribution of aldosterone and renin to the risk of hypertension. *Hypertension* 46(4):864, 2005.
289. Abe M, Kaldunski M, Liang M, Roman RJ, Cowley AW Jr. Effect of sodium delivery on superoxide and nitric oxide in the medullary thick ascending limb. *Hypertension* 46(4):857, 2005.
290. Mori T, Glocka P, Skelton M, Kaldunski M, Cowley AW Jr. Specific role of renal perfusion pressure in the development of renal injury in Dahl salt-sensitive rats. *Hypertension* 46(4):821, 2005.
291. Taylor NE, Maier KG, Roman RJ, Cowley AW Jr. NOS uncoupling in the kidney of Dahl S rats-role of dihydrobiopterin. *Hypertension* 48:e39, 2006.
292. Michalkiewicz M, Michalkiewicz T, Slocum GR, Singer O, Cowley AW Jr., Greene AS, Jacob HJ, Kaldunski ML, Roman RJ, Verma IM. Efficient transgenic rat production by a lentiviral vector. *FASEB J.* 20: A407, 2006.
293. Moreno C, Kaldunski ML, Wang T, Lazar J, Roman RJ, Greene AS, Jacob HJ, Cowley AW Jr. Existence of multiple blood pressure loci on rat chromosome 13 of the Dahl S hypertensive rat. *FASEB J.* 20: A407, 2006.
294. Taylor NE, Glocka P, Liang M, Cowley AW Jr. The contribution of renal medullary NADPH oxidase and mitochondrial superoxide production to salt-induced hypertension in Dahl S rats. *FASEB J.* 20: A724, 2006.
295. O'Connor PM, Cowley AW Jr. Vasopressin V₂ receptor-mediated Ca²⁺ transients in the rat inner medullary collecting duct are dependent on phospholipase C and extracellular Ca²⁺. *FASEB J.* 20:

- A1220, 2006.
296. Arenas IA, Deslauriers B, Tremblay J, Brunell P-L, Gossard F, Gurau A, Antoniol G, Merlo E, Seda O, Gaudet D, Kotchen TA, Cowley AW Jr, Hamet P. Dynamic linkage of 192 candidate genes for blood pressure during orthostatic stress in sibpairs from French Canadian families ascertained by hypertension. *J. Hypertens* 24(6):42, 2006.
 297. Cowley AW Jr, Roman RJ, Moreno C, Quinn, Greene AS, Michalkiewicz M, Jacob H. Progress in understanding the genetic and physiological basis of salt-induced hypertension. *J. Hypertens* 24(6):82, 2006.
 298. Arenas I, Tremblay J, de Champlain J, Nadeau R, Larochelle P, Francis G, Daniel G, Sas G, Florescu M, Kotchen TA, Cowley AW Jr, Hamet P. Heritable factors for body fat composition are primary determinants of left atrial enlargement in French Canadians. *J. Hypertens* 24(6):162, 2006.
 299. Abe M, O'Connor P, Toyohara T, Suzuki T, Tanemoto M, Abe T, Ito S, Cowley AW Jr. Hydrogen peroxide, produced by high sodium stimulation, potentially stimulates the production of superoxide anion in MTAL. *J. Hypertens* 24(6):397, 2006.
 300. Gutterman DD, Cowley AW Jr. Relating cardiac performance with oxygen consumption: historical observations continue to spawn scientific discovery. *Am. J. Physiol Heart Circ Physiol* 291(6):H2555-6, 2006.
 301. Kwitek AE, Jacob HJ, Baker JE, Dwinell MR, Forster HV, Greene AS, Kunert MP, Lombard JH, Mattson DL, Pritchard KA Jr, Roman RJ, Tonellato PJ, Cowley AW Jr. BN phenome: detailed characterization of the cardiovascular, renal, and pulmonary systems of the sequenced rat. *Physiol Genomics* 13;25(2):303-13, 2006.
 302. Polichnowski AJ, Kurth T, Sweis O, Adeyumo A, Cowley AW Jr. ROS scavenging is independent of renal perfusion pressure in angiotensin II/L-NAME hypertensive rats. *FASEB J.* 21:A895, 2007.
 303. Moreno C, Dwinell MR, Majewski RR, Kwitek AE, Jessner MJ, Feroah TR, Forster HV, Mattson DL, Lombard JH, Macquestion GD, Roman RJ, Greene AS, Cowley AW Jr, Jacob HJ. High-throughput production and phenotyping of rat knockout models for hypertension. *FASEB J.* 21:A1236, 2007.
 304. O'Connor PM, Cowley AW Jr. NaCl stimulates greater superoxide production in isolated renal medullary thick ascending limb segments from Dahl salt sensitive (SS) rats compared to consomic, salt-resistant SS-13BN rats. *FASEB J.* 21:A453, 2007.
 305. Feroah TR, Forster HV, Merritt A, Dwinell M, Moreno-Quinn C, Greene A, Jacob H, Kwitek A, Cowley A Jr. Significant differences in novel and adapted circadian movement behavior in three parental and two ENU knockout inbred strains of rats. *FASEB J.* 21:A595, 2007.
 306. Tian Z, Greene AS, Usa K, Matus IR, Pietrusz JL, Cowley AW Jr, Liang M. Proteomic analysis of the renal medulla of Dahl salt-sensitive rats and consomic SS-13BN rats. *FASEB J.* 21:A896, 2007.
 307. Heilman K, Twigger S, Lu L, Pietrusz JL, Cowley AW Jr, Liang M. SiMAP: Systems and integrative molecular atlas of physiology. *FASEB J.* 21:A1354, 2007.
 308. Feroah TR, Kloehn M, Eich D, McQuestion G, Merritt A, Forster HV, Dwinell M, Greene A, Kwitek A, Jacob H, Cowley A Jr. High through-put screening method for novel and circadian movement behavior and breathing in ENU mutagenic and consomic inbred strains of rats. *FASEB J.* 21:A1396, 2007.
 309. O'Connor PM, Cowley AW Jr. Medullary thick ascending limb buffers the vasoconstrictor actions of angiotensin II in vasa recta capillaries of salt-insensitive consomic (SS.13Bn) rats but not salt-sensitive rats. *J. Hypertens* 50(4): 90, 2007.
 310. Feroah TR, Vernon HJ, McQuestion G, Hutchins W, Forster HV, Ferri R, Manconi M, Merritt A, Dwinell M, Moreno-Quinn C, Cowley A Jr, Jacob H. Estimating circadian sleep/wake cycle from rest/activity behaviors in inbred strains of rats. *FASEB J.* 22:946.2, 2008.
 311. Feroah TR, Vernon HJ, McQuestion G, Forster HV, Merritt A, Dwinell M, Moreno-Quinn C, Greene A, Cowley A Jr, Jacob HJ. High-throughout screening of circadian rest/activity cycle can detect significant differences estimates of sleep/wake cycle in ENU knockout inbred strains of rats. *FASEB J.* 22:946.3, 2008.
 312. Polichnowski AJ, Kaldunski M, Cowley AW. Pressure-induced renal injury is attenuated in norepinephrine-induced hypertensive rats. *FASEB J.* 22:969.10, 2008.
 313. Hu C, Polichnowski A, Kurth T, Mori T, Ito S, Cowley AW Jr. Elevated arterial perfusion pressure increases H₂O₂ in the renal medullary interstitium. *FASEB J.* 22:1160.3, 2008.
 314. Jin C, Cowley AW Jr. Blunted renal medullary blood flow responses in Dahl S rats following a hypertonic sodium load. *FASEB J.* 22:1160.4, 2008.
 315. O'Connor PM, Lu L, Cowley AW Jr. An amiloride-sensitive H⁺ transporter accounts for excess O₂-production in the mTAL of salt-sensitive rats independent of Na⁺/H⁺ exchange. *Hypertension.*52:e70,

- 2008.
316. Liang M, Lee NH, Wang H, Greene AS, Kwitek AE, Kaldunski ML, Luu TV, Frank BC, Bugenhagen S, Jacob HJ, Cowley AW Jr. Molecular networks in Dahl salt-sensitive hypertension and renal injury. *Hypertension*.52:e102, 2008.
 317. Roman RJ, Williams JM, Moreno C, Lazar J, Cowley AW Jr, Jacob HJ. Narrowing of a region on rat chromosome 13 that protects against the development of hypertension using overlapping Dahl SS.13BN congenic strains. *Hypertension*.52:e103, 2008.
 318. Jin C, Mori T, Polichnowski A, Ito S, Cowley AW Jr. Effects of renal decapsulation upon arterial pressure-induced medullary oxidative stress. *Hypertension*.52:e112, 2008.
 319. Tian A, Liu Y, Usa K, Mladinov D, Fang Y, Ding X, Greene AS, Cowley AW Jr., Liang M. A novel role of fumarate metabolism in Dahl-salt sensitive hypertension. *Hypertension* 54: e63, 2009.
 320. Lu L, Li P, Yang C, Kurth T, Misale M, Skelton M, Moreno C, Greene AS, Jacob HJ, Roman RJ, Lazar J, Liang M, Cowley AW Jr. Dynamic utilization of biological pathways in preprotection against salt-sensitive hypertension. *Hypertension* 54: e62, 2009.
 321. Jin C, Cowley AW Jr. Changes in renal interstitial fluid pressure do not mediate arterial pressure-induced medullary NO production. *FASEB J*. 23: 605.11, 2009.
 322. Polichnowski AJ, Jin C, Yang C, Cowley AW Jr. Renal outer medullary oxidative stress is dependent upon elevated renal perfusion pressure in angiotensin II-induced hypertensive rats. *FASEB J*. 23: 1016.6, 2009.
 323. O'Connor PM, Fang Y, Fend D, Liu Y, Liang M, Ferreri N, Cowley AW Jr. Nox2 is required for amiloride-sensitive H⁺ efflux in a rat medullary thick ascending limb cell line. *FASEB J*. 23: 803.8, 2009.
 324. Jin C, Polichnowski A, Ohsaki Y, Cowley AW Jr. The effect of renal perfusion pressure on renal injury in hyperglycemic AngII hypertensive rats. *FASEB J*. 24: 983.5, 2010.
 325. Feng D, Yang C, Kurth T, Liang M, Moreno Quinn C, Jacob H, Cowley AW Jr. Renal medullary NAD(P)H-oxidase subunit p67phox as a candidate gene in salt-sensitive hypertension. *FASEB J*. 24: 791.6, 2010.
 326. Feng D, Geurts A, Kurth T, Yang C, Liang M, Jacob HJ, Cowley AW Jr. Role of renal medullary NAD(P)H-oxidase subunit p67phox in development of salt-sensitive hypertension and renal injury in SS rats. *Hypertension*. 56(5): e67, 2010.
 327. Ohsaki Y, Mori T, Ryan RP, Dickinson BC, Chang CJ, Cowley AW Jr. Increase of flow rate to medullary thick ascending limb stimulates the mitochondrial respiratory chain production of hydrogen peroxide. *Hypertension*. 56(5): e166, 2010.
 328. Lu Y, Mori T, Hu C, Ohsaki Y, Dickinson BC, Chang CJ, Cowley AW Jr, Ito S. Angiotensin II increases mitochondrial reactive oxygen species through mitochondrial respiratory chain in medullary thick ascending limb of the rat kidney. *Hypertension* 56(5): e121, 2010.