CURRICULUM VITAE

Richard J. Roman Billy S. Gutyon Distiguished Professor and Chair
Department of Pharmacology & Toxicology
University of Mississippi Medical Center
2500 North State Street
Jackson, MS 39216-4505

Telephone Number
(601) 984-1602 Office
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Marital Status Married, two children

Citizenship U.S.A.

EDUCATION:

1973	B.S.	Chemical Engineering Rutgers University New Brunswick, New Jersey
1977	Ph.D.	Pharmacology University of Tennessee Centers for Health Sciences Memphis, Tennessee
1977-81		Postdoctoral Fellowship Physiology Harvard Medical School Boston, Massachusetts

PROFESSIONAL LICENSURE: None

ACADEMIC TITLES

1973-1977 Teaching Assistant and graduate student (under Dr. Michael L. Kauker), Department of Pharmacology, University of Tennessee Center for the Health Sciences, Memphis, TN.

1977-1979 Research Fellow in Physiology (under Dr. Claude P. Lechene), National Biotechnology Resource in Electron Probe Microanalysis, Harvard Medical School, Boston, MA.

1979-1981	Research Associate in Physiology (under Dr. Claude P. Lechene), Harvard Medical School, Boston, MA.
1980-1981	Assistant Director, National Biotechnology Resource in Electron Probe Microanalysis, Department of Physiology, Harvard Medical School, Boston, MA.
1981-1986	Assistant Professor, Department of Physiology, Medical College of Wisconsin, Milwaukee, WI.
1986-1990	Associate Professor, Department of Physiology, Medical College of Wisconsin, Milwaukee, WI.
1990-2009	Tenured Professor, Department of Physiology, Medical College of Wisconsin, Milwaukee, WI.
2004-2009	Tenured Professor of Physiology, Medicine and Pediatrics, Director of Kidney Disease Center, Medical College of Wisconsin.
2009-present	Professor & Chair, Department of Pharmacology & Toxicology, University of Mississippi Medical Center, Jackson, MS. Tenured 2010 retroactive to 2009.
2010-present	Professor of Medicine (Nephrology), University of Mississippi Medical Center, Jackson, MS. Tenured 2010 retroactive to 2009.
2010-present	Associate Director- T32 Cardiorenal Disease Training Program, University of Mississippi Medical Center, Jackson, MS.

NONACADEMIC PROFESSIONAL POSITIONS

2010-present	Academic consultant for Taisho Pharmaceutical Corp for the development of novel treatments for diabetes and diabetic nephropathy. Much of the preclinical drug development work was funded by contract in my laboratory at UMC.
1998-2009	Founder, Vice President of Research of Physiogenix Inc., Milwaukee, WI. Genome based drug discovery company concentrating on the use of consomic and congenic rats for genetic discovery and the development of novel genetic-based, disease models for drug discovery.
2002-2005	Academic Consultant for Exelixis Corp development of XL784 a broad spectrum MMP2 inhibitor for the treatment of diabetic nephropathy. My laboratory did the preclinical work and this drug reached phase 2 clinical trials.

1999-2003	Academic Consultant for International Life Sciences Institute Committee on Applications of Genomics to Mechanism Risk Assessment. Coordinator of studies performed by a consortium of approximately 50 laboratories in the Pharmaceutical Industry to evaluate the use of cDNA based expression arrays and proteomics to evaluate common renal and hepatotoxins.
2003-2005	Academic Consultant for International Life Sciences Institute Committee on Biomarkers for Risk Assessment. Coordinator of studies performed by a consortium of approximately 50 laboratories in the Pharmaceutical Industry to evaluate the use of novel biomarkers to evaluate renal toxicity.
2003-2006	Consultant, Tashio Pharmaceutical Corp, development of a new 20-HETE inhibitor for the treatment of stroke.
2005-2007	Consultant, Merck Pharmaceutical Corp, Development of new K sparing diuretics for the treatment of hypertension.

Hospital Staff Appointments: None

Military Service: None

UNIVERSITY OF MISSISSIPPI MEDICAL CENTER COMMITTEES

2009-2012	Research Strategic Plan Subcommittee: Chair of Core Facilities.
2009-2012	Research Strategic Plan Subcommittee: Chair of Research Park/ Tech Transfer and Contract based Research.
2009-Present	Executive Faculty Committee
2009-Present	Research Affairs Advisory Committee
2010-2012	Graduate Council
2010-2012	Medical Science Training Program: Admission Committee
2010-present	Associate Director Cardiorenal Traing Program
2010-Present	Permanent member of the Technology Transfer Committee that reviews disposition of invention disclosures
2010	Member of a Special Committee to revise Promotion and Tenure Criteria
2010	Committee to Rewrite Rules regarding Post Tenure Review
2012-2014	Center and Institute Committee- developed recommendations defining interaction of Institutes with Departments.
2013-2014	Executive Planning Committee to Enhance Clinical and Translational Research
2013-Present	Vice Chancellors Research Advisory Committee
2012- Present	Member of Internal Advisory Committee for Cobre Program for Pyschiatric Neuroscience

2013- Present	Member of Internal Advisory Committee for Cobre Program for Cardiorenal and Metabolic Diseases Research Center.

Previous MEDICAL COLLEGE OF WISCONSIN COMMITTEES

1983	Search Committee, Library Director
1983	Committee for Summer Undergraduate Research Program
1985	Chairman, Graduate Programs Committee
1985-87	Graduate Programs Committee
1988-91	Search Committee, Pharmacology Chairman
1987-91	Library Committee
1995-98	Graduate Curriculum Committee
1996-98	Coordinator MCW-industrial research partnerships
1999	Department of Medicine Review Committee

MEDICAL COLLEGE OF WISCONSIN DEPARTMENTAL DUTIES

1986-89	Director, Seminar Program
1987-88	Molecular Biology Planning Committee
1988	Chair, Graduate Student Recruitment
1986-present	Director of the Biochemical and Molecular Core Laboratories (supervise a staff of 5) for NIH funded Hypertension Program Project, SCOR hypertension grant, Cerebrovascular Program Project, Program project in Functional Genomics and Departmental research.

TEACHING RESPONSIBILITIES

Last 5 years UMC

2009-present	Lecturer in Medical Pharmacology (PH620) course- 30 hrs/yr- Diuretics, Antihypertensive Agents and Cardiovascular Pharmacology, General Principles Pharmacology, Pharmacodynamics and Pharmacokinetics, Eicosanoids, NSAIDS, Arthritis and Gout drugs.
2013-present	Medical Pharmacology (PH620)- Small Group Teaching- Autonomics 8 hrs/yr, Antiarrythmic Agents/Heart Failure 8 hrs/yr
2009-present	Dental Pharmacology (PH626) 18 hrs/yr – Diuretics, Antihypertensive Agents, Pharmacodynamics, Pharmacokinetics, Autocoids, NSAIDs, review, exam prep.
2009-present	Lecturer Graduate Grant Writing Course, Advanced Pharmacology. Univ of MS Medical Center.
2009-present	Mechanisms of Drug Action Graduate Course (PH723) 12 hrs/yr, Advanced Topics in diuretics, hypertension, pharmacodynamics and pharmacokinetics as well as review and exam prep.

Previous Teaching Experience

1977-1977	University of Tennessee Center for Health Sciences teach Medical, Dental and Pharmacy students/Pharmacology Laboratory. *Approximately 12 labs/48 hours per semester*
1983-2001	Course Director for a Graduate course in Advanced Renal Physiology offered to graduate students, nephrology residents and house staff *45 hours/alternate years.*
1983-2001	Lecturer in graduate course in Cell and Transport Physiology. *6-10 hours/alternate years*
1981-2009	Medical College of Wisconsin Renal, Cardiovascular and Endocrine Physiology lectures in a Medical Physiology course, small group teaching and renal computer and wet laboratory. *42 contact hours/year*
2003- 2009	Medical College of Wisconsin GI Physiology lectures in a Medical Physiology course, small group teaching and renal computer and wet laboratory. *16 contact hours/year*
2001-2009	Lecturer, Co-director Graduate Course in Functional Genomics. *10 hours a year on Molecular Biology, QTL mapping, gene transfer, transgenic, consomic and congenic rats, expression arrays, positional cloning, high throughput phenotyping techniques.*
2000-2009	Lecturer in Senior Medical Student Elective Course in Pathophyisology. Treatment of hypertension and hypertension and diabetes induced renal disease. *4 hours a year*

EDUCATIONAL ACCOMPLISHMENTS

1988	Wrote a compTuter model of kidney and computer labs on renal hemodynamics that are still in use in first year laboratory at MCW and several other Medical Schools. Roman, R.J., and F. Sias. Network computer analysis of the human kidney. Math. Modeling 7:1045-1069, 1986.
1983-97	Wrote and ran a wet lab on renal physiology for 1st year Medical Students
1997	Converted wet lab into a dry lab exercise still in use at MCW. Wrote and introduced 5 case studies in Renal Physiology for the first year course that are still in use.

MEMBER OF THE DISSERTATION COMMITTEE OF THE FOLLOWING GRADUATES

UMC

Marilyn Burke, Ph.D., 2011

Ashlyn Harmon, Ph.D., 2014

Xuchong He, Ph.D., 2014

Jessica Anderson, Ph.D., 2014

Tiffany White, Ph.D., 2014

Jessica Faulkner, Ph.D., 2015
Ellen Gillis, Ph.D., 2015
Xiahou Wang, Ph.D., 2015
Ashlyn Harmon, Ph.D., 2015

MCW

David Merrill, Ph.D., 1985
David Zawieja, Ph.D., 1986
Joel Swerdel, M.S., 1986
Glen Smits, M.S., 1986
Tracy Kangas, M.D., Ph.D., 1988
Jose Krieger, M.D., Ph.D., 1988
Richard Riece, M.D., Ph.D., 1989
Suzanne Greenberg, Ph.D., 1990
Monica Jablonski, Ph.D., 1990
Sharon Lu, Ph.D., 1992
Jeff Molkentin, Ph.D., 1994
Craig Plato, Ph.D., 1996
Nabil Alkayed, Ph.D., 1995
Shawn Jobe, M.D., Ph.D., 1997
Kathy Rein, Ph.D. 1997
Andy Lange, M.D., Ph.D, 1997
Frank Park, Ph.D., 1997
Reza Tahazi, Ph.D., 2001

GRADUATE STUDENT ADVISOR TO THE FOLLOWING DEGREE CANDIDATES

UMC (last 5 years)

Marylin Burke, PH.D. 2012
Jin Zhang, Graduate Student, Jackson State Univ.11/09-6/11.

Previous MCW

David Mattson, Ph.D., 1990, Professor, Department of Physiology, Medical College of WI.
David Stec, Ph.D., 1996, Associate Professor, Department of Physiology, UMMC.
John Jiang, Ph.D., 1997, Sr. Scientist, SKF Corp.
Annette Dahly, Ph.D., 2005, Sr Scientist PhysioGenix Inc Wauwatosa WI
Katie Dunn, Ph.D., 2008, Instructor Caroll College, Waukesha, WI

POSTDOCTORAL ADVISOR

Last 5 years- UMC

11/05-3/09	Jan Williams PhD, Associate Professor, Department of Pharmacology Univ of MS Med Center, Jackson, MS
6/10-6/12	Pabbidi M. Reddy DVM, PhD, Assistant Professor, Dept of Pharmacology, Univ of MS Medical Center
11/10-4/12	Andy Chen PhD, Assistant Professor, Pennsylvania College of Osteopathic Medicine, Erie PA.
5/10-5/13	Sydney Murphy PhD, Assistant Professor, Dept of Pharmacology, Assistant Dean of Graduate School, Univ of MS Medical Center, Jackson, MS
7/11-10/13	Naioki Kojima, PHD Staff Scientist, Taisho Pharmaceutical Corp, Saitama, Japan
5/13-3/15	Fan, Fan MD, MS, Assistant Professor, Dept of Pharmacology, Univ of MS Medical Center
9/11- 9/15	Ying Ge, MD, Staff Scientist, Dept of Pharmacology, Univ of MS Medical Center
8/12-10/14	Sadoshyio Kato, Staff Scientist, Taisho Pharmaceutical Corp, Saitama, Japan
6/13-9/15	Tahashi Hirata, Staff Scientist, Taisho Pharmaceutical Corp, Saitama, Japan
12/12-09/15	Yoshiskazu Muroya, MD, PhD, Associate Professor, Departments of Medicine and Rehabilitation. Tohoku Medical and Pharmaceutical University School of Medicine, Sendai, Japan

Previous Fellows- MCW

7/84-10/86	K. Takezawa, M.D., Department of Pathology, St. Luke's Hospital, Milwaukee, WI
7/84-12/86	C. Sanchez-Ferrer, M.D., Ph.D., Professor, Department of Pharmacology, University of Autónoma, Madrid, Spain
2/86-8/88	J. Garcia-Estañ, M.D., Ph.D., Dean of Medical Schoo1, Professor, Department of Physiology, University of Murcia, Murcia, Spain
2/89-6/91	Bresnaham, M.D., Associate Professor of Medicine, Department of Nephrology, Medical College of Wisconsin
2/89-10/91	F. Fenoy, M.D., Ph.D., Professor, Department of Physiology, University of Murcia, Spain
9/88-12/91	Y.-H. Ma, Ph.D., Professor, Chang Gung Univ, Tawain
6/88-6/91	D. Gebremedhin, Ph.D., Associate Professor, Department of Physiology, Medical College of Wisconsin.
10/90-9/93	John Imig, Ph.D., Professor, Department of Physiology, Univ of Georgia Medical College, Augusta, GA.
7/92-7/94	Ai-Ping Zou, Ph.D., M.D., CSR Microcirculation and Hypertension Study Section, National Institutes of Health Bethesda, MD
1994	John Fleming, Ph.D., Professor, Department of Physiology, Univ. of Louisville, Louisville, KY. Sabattical year
4/96-7/98	Osamu Ito, Ph.D., M.D., Associate Professor, Department of Medicine, Sendai, Japan.

10/95-4/00	Magdelana Alonso-Galacia, Ph.D., Sr. Scientist, Cardiorenal Division, Merck Sharpe and Dohme Corp.
4/99-4/00	Hiroshi Okamato, M.D.,Associate Professor, Department of Anesthesiology, Tokhu Medical School, Toyko, Japan,.
5/87-5/88	Thomas Wilson, Ph.D. Professor and Dean of Medical School Univ of Saskatoon School of Medicine, Saskatoon, Canada, Sabbattical year
1/96-12/00	Chung Wen-Sun, M.D., Assistant Professor, Department of Pharmacology, Univ of North Dakota School of Medicine, Gainesville, FL,.
4/00-12/00	Franz Kehl, M.D., Professor, Department of Anesthesiology Hannover Germany.
8/98-6/03	Kris Maier, Ph.D., Assistant Professor of Surgery, SUNY Medical School, Syracuse, NY
7/99-6/03	Kimberly Hoagland, Ph.D., Director Safety Pharmacology, Merck and Co. West Point, PA.
1/00-2/02	Carol Moreno, M.D., Ph.D., Assistant Professor, Department of Pediatrics, Medical College of Wisconsin,.
7/00-12/03	Ming Yu, M.D., Ph.D., Senior Scientist, BMS Corp, Boston MA.
3/01-6/03	Elizabeth Santos, Ph.D., Res Assistant Professor, Medical College of Virgina, Richmond, VA.
3/01-9/02	Capunar-Sapunar L, MD, Assistant Professor, Department of Radiology, Univ of Split Medical School, Croatia.
4/03-9/05	Kuzu Tacheguchi, MD, Assistant Professor, Department of Pharmacology, Hammumatsu, Japan Albert Sarkis, Ph.D. 9/02-9/05. Regional Director of Pharmacy, Walmart Corp, Menomonee Fall, WI
3/03-3/06	Bernardo Lopez, Assistant Professor, Department of Physiology, Univ of Murcia Medical School, Murcia, Spain
12/04-9/09	Maria Renic, Postdoctoral Fellow, Department of Physiology, Medical College of Wisconsin

PREVIOUS GRANTS- Medical College of Wisconsin (Total $24,032,621)

9/81-9/82	Institutional Research Award, P.I. $5,000.
9/82-9/83	Institutional Research Award, P.I. $3,500.
9/82-9/83	Michael Hack Foundation, $5,000.
7/82-7/83	American Heart Association/Wisconsin Affiliate, P.I. $8,100.
7/83-7/84	American Heart Association/Wisconsin Affiliate, P.I. $10,892.
12/84-6/85	Upjohn Company, P.I. $3,500.
7/83-7/86	American Heart Association, P.I. $79,750.
3/83-3/88	NIH 1-PO1-HL29587, Project 3 leader, $791,665 direct, $1,187,497 total.

7/87-7/88	American Heart Association/Wisconsin Affiliate - Predoctoral Fellowship, David Mattson, $6,552.
7/86-7/89	NIH 1-RO1-HL36279-01, P.I. $215,695, $323,542 total
1/89-1/90	DuPont Corporation. Renal and Antihypertensive Effects of DuP 753. R.J. Roman, P.I. $11,800.
1/90-3/90	DuPont Corporation. Renal Effects of DuP763, a renal sparing antiinflammatory agent. R. Roman, P.I., $7,850.
1/90-1/91	Marion Laboratories. Effects of intrarenal diltiazem on renal function of SHR. R. Roman, P.I., $20,000.
7/89-3/91	Berlex Corporation. Cardiovascular and Renal Actions of Cytochrome P450 Suicide Substrate Inhibitors, $20,000.
7/86-7/91	American Heart Association: Established Investigator Award, $207,400 total.
3/88-3/93	NIH 2-PO1-HL29587, Blood Pressure Determinants and Controllers, Dr. A.W. Cowley, Jr., Principal Investigator -R. Roman, Project 1 Leader, 40% effort, Relationships Between Arterial Pressure and Renal Excretion, $530,006 direct, 795,009 total.
3/88-3/93	NIH 2-RO1 DK34793, Novel Inflammatory Mediators in Glomerulonephritis, E. Lianos, P.I., R. Roman, Co-investigator, 5% effort, $567,735 direct, $820,000 total .
7/91-6/93	American Heart Association, Postdoctoral Fellowship for G. Ma, Role of Cytochrome P450 in Salt-Sensitive Hypertension. Sponsor, $41,500.
3/92-3/95	NIH F32 DK08676, P450 and NO in the Control of Renal Vascular Tone, NRSA award for J. Imig., $79,258.
7/89-7/94	NIH 2-RO1 HL36279, Vasa Recta Hemodynamics in Genetically Hypertensive Rats, R. Roman, P.I., 30% effort, $487,088 direct, $567,735 total.
11/93-6/94	DuPont Pharmaceutical Corp, Effects of WY-47766 on Renal Function of Rats, R. Roman, P.I., $7,500.
7/94-7/95	AHA/Wisconsin Affliate 94-Pre-20. Mechanisms of Salt Sensitive Hypertension in Dahl Rats. Predoctoral Fellowship for D. Stec., R. Roman, sponsor, $8,800.
7/95-7/96	AHA/Wisconsin Affiliate 95-pre-14. Mechanism of Salt- Sensitive Hypertension in Dahl S rats. Predoctoral fellowship for D. Stec, R. Roman sponsor, $24,000.
7/95-7/96	AHA/Wisconsin Affiliate 95-pre-05. Lovastatin, Small G proteins and the Development of Hypertension in Spontaneously Hypertensive Rats.Predoctoral fellowship for J. Jiang, R. Roman, Sponsor, $24,000.
1/93-1/96	NIH 1-RO1 HL-49219-02. Renal V1 Receptors in Hypertension. A.W. Cowley, P.I., R. Roman, Co-investigator, 5% effort, $336,003 direct, $504, 003 total.
3/93-3/98	NIH 3-P01-HL29587-11, Blood Pressure Determinants and Controllers- R. Roman, Project 2 Leader, 35% effort, P450 Eicosanoids in the Control of Renal Tubular and Vascular Function, Biochemical Core director, $585,135 direct, $877,702 total.
7/96-7/97	Antihypertensive effects of Fenofibrate and other antilipidemic agents. $12,000.

9/96-12/97	Searle Corp. Effects of NS 398, a cycloxygenase 2 inhibitor, on renal function. $7,500.
11/97-2/98	Genzyme Corp. Effects of TGFb on renal medullary hemodynamics. $8,500.
1/98-6/98	Smith Kline and Beecham Corp. Effects of A26673 on blood pressure and renal function in rats. $58,500 total.
3/90-2/99	NIH 2-R37 HL33833-13. Myogenic Response in Cerebral Arteries. D.R. Harder, P.I., R. Roman, Co-investigator, 10% effort, $667,052 direct, $1,041,358 total.
12/94-12/99	NIH 3-RO1-HL36279-13, P450 Eicosanoids and Altered Renal Function in Dahl S rats. R. Roman, P.I., 20% effort, $694,239 direct, $1,000,578 total.
9/99-10/02	Tashio Pharmaceutical Corp., 20-HETE Agonist and Antagonists for Treatment of Cardiovascular Disease and Asthma. PI, R. Roman, $550,000 total.
9/99-12/00	Genzyme Corp. TGFb antagonists in the treatment of glomerulosclerosis. PI, R. Roman, $38,000.
3/98-3/03	NIH 4-P01-HL29587-17, Blood Pressure Determinants and Controllers- R. Roman, Project 3 Leader, 25% effort, NO-20-HETE Interaction in the Control of Renal Function., $1,102,502 direct, $1,653,753 total. Biochemical Core director $601,685 direct, $902,527 total.
11/00-3/02	BioNebraska Corp., Renal Effects of rGLP-1 in rats. PI R. Roman $60,250.
3/01-3/04	Genzyme Corp. TGFb antagonism in the treatment of glomerular disease. PI, R. Roman, $263,000
9/00-7/04	NIH1 U01, HL66579-01, Physiogenomics of Stressors in Derived Consomic Rats PI, H. Jacob, R. Roman, Investigator phenotyping component, director of biochemical core, 10% effort, $575, 005 direct, $902,527 total.
3/99-3/04	NIH PO1, HL 59996-01, NO-20-HETE in the Control of Cerebral Vascular Tone. D.R. Harder PI, R.Roman, Project 2 Leader and Molecular and biochemical core director, 20% effort, $1,110,552 direct, $1,665,828 total.
4/00-4/05	NIH 4-RO1-HL36279-13, P450 Eicosanoids and Altered Renal Function in Dahl S rats. R. Roman, P.I., 20% effort, $875,000 direct, $1,312,500 total.
1/01-12/06	NIH 1-PO1 HL-54998-04. SCOR Molecular Genetics of Hypertension. A.W. Cowley, PI, R. Roman, Co-investigator, Project 3 Genes of Hypertension in Dahl S rats, 5% effort, current year, $86,250 total. Core D biochemical core director, 5% effort, $387,500 direct, $581,250 total.
7/00-7/05	Taisho Pharmaceutical Corp., P4504A enzyme inhibitors in the treatment of subarachnoid hemmorrage. PI, R. Roman, $580,000.
12/04-12/05	Taisho Pharmaceutical Corp, Antiangiogenic actions of CYP Inhibitors PI, R. Roman, $180,000
12/04–1/06	NIH 1-R01-DK064969-01 Cytochrome P-450 and Glomerular Protein Permeability. PI Ellen McCarthy. R Roman, Co-investigator 5% effort, $800,000 direct, $1,200,000 total.

3/03-3/08 NIH 5-PO1-HL29587-18, Blood Pressure Determinants and Controllers- R. Roman, Project 3 Leader, 25% effort, , $1,102,502 direct, $1,653,753 total, Biochemical Core director Core $601,685 direct, $902,528 total.

9/00-9/08 NIH 1 U01 HL66579-05 Knock-out Rats for Physiological Genomics –Phenotyping Component, PI H. Jacob, R. Roman, Co-investigator, 5% effort, current year $11,377.

12/04–11/07 NIH 1 RO1 DK 04168-15. Cellular Regulation of Prostaglandin Synthesis. PI Andre Sorokin, R Roman, Co-investigator $600,000 direct, $900,000 total.

1/06-1/07 LifeBlood Inc. Development of improved storage media for organ transplantation. PI R. Roman, $65,000.

5/09-10/09 Johnson and Johnson Development Grant. 20-HETE antagonists for the treatement of solid tumors. $100,000.

10/07-10/09 1 P01 DK079306. Integrative Biology of Childhood Kidney Disease. PI Ellis Avner, Co-PI Richard Roman. Project 1 leader Genetic Basis of Altered Renal Hemodynamics and the Development of Glomerular Disease in FHH rats. 10% effort, Director Biochem and Mass Spec Core 5% effort. $1,250,000 direct, $1,875,000 total.

12/06–11/11 NIH 1 R01 HL69321-04 Physiological Genomics of Hypertensive Renal Disease, PI Howard Jacob, R Roman Co-investigator.

12/05-10/09 NIH PO1, HL 59996-10. Mechanisms Regulating Cerebral Blood flow -D.R. Harder PI, R.Roman, Project 2 Leader Role of 20-HETE in SAH and Molecular and biochemical core director, 20% effort, $1,220,850 direct, $1,831,275 total.

3/06-10/09 NIH 1-PO1 HL082798. Genetic and Physiologic Basis of Salt-induced Hypertension. PI Allen W. Cowley Jr., R Roman Project 2 leader, 20% effort, Identification of a gene attenuating hypertension in SS-BN13 rats. $1,163,350 total

RECENT COMPLETED FUNDING- Last 5 years UMC (Total $2,868,332)

1/10-1/11 NIH PO1, HL059996-10. Mechanisms Regulating Nutritive Cerebral Blood flow – (Subaward) D.R. Harder PI, R. Roman, Project 1 Leader, 20% effort, Role of 20-HETE in hemorrhagic stroke. $171,000 direct, $270,000 total.

10/08-5/12 1-P50-DK079306-05. Integrative Biology of Childhood Kidney Disease. (Subaward) PI Ellis Avner, Co-I Richard Roman. Project 2 leader, Genetic Basis of Altered Renal Hemodynamics and the Development of Glomerular Disease in FHH rats. 4% effort. $410,052 direct, $615, 078 total.

3/08-2/13 NIH 5-PO1-HL029587-30, Blood Pressure: Determinants & Controllers (Subaward) PI A. Cowley, R. Roman, Project 3 Leader, Role of CYP Eicosanoids in altering Pressure Natriuresis in Hypertension- 20% effort, $935,365 direct, $1,421,754 total.

7/11-7/13 SGLT2 Inhibitors for the treatment of Diabetes. R. Roman PI. Taisho Pharmaceutical Corporation. 10% effort, $400,000.

7/10-7/13 NIH NRSA award for M. Burke $88,500 total.

7/10-7/12 AHA Postdoctoral fellowship for Sidney Murphy $73,000

CURRENT ACTIVE GRANTS AND CONTRACTS (**Total $11,112,390)**

4/05-4/17	NIH 5-R37-HL036279-30 MERIT AWARD, 20-HETE-TGF-beta in Hypertension-Induced Renal Injury. R Roman, PI, 25% effort, $1,515,000 direct, $2,302,800 total.
6/12-6/14	AHA Postdoctoral Fellowship, 20-HETE in the regulation of renal vascular tone R. Roman Sponsor-Ying Ge $95,000 total.
12/11-12/16	NIH 1-RO1-HL-105997 Autoregulation of Cerebral Blood Flow, D. Harder and R. Roman, Co-PI. 10% effort, $3,485,954, subcontract to UMC $446,250 direct, $677,350 total.
9/11-12/16	Novel therapies for the treatment of Diabetic Nephropathy. R. Roman, PI, Taisho Pharmaceutical Corporation. 10% effort, $2,050,000 total.
9/12-9/14	Effect of Empagliflozin on the progression of Hypertension and Diabetic Nephropathy. 5% effort, $325,000 total.
5/10-5/20	NIH T32 Training Grant in Cardiorenal Disease, Joseph Granger PI, R. Roman, Associate Director. 5% effort, No salary support
10/13-10/18	NIH 1-P20 GM104357 Cardiorenal and Metabolic Diseases Research Center, J Hall PI, R. Roman Director Core C Animal and Molecular Core. 10% effort $1,327,650 direct; $1,987,500 total and SubCore B, Director Mass Spectroscopy 5% Effort, $490,000 direct, $735,000 total.
8/13-8/18	NIH 3-P30 RR017701 Center for Psychiatric Neurosciences COBRE. C. Stockmier PI, R. Roman, Core Program Coordinator, Oversee core operations and allocation of resources, mentoring. 10% effort $90,500 direct, $135,750 total.
9/14-7/18	NIH 1 R01 DK104184-01 Renal microcirculation and hypertension induced renal injury, R. Roman PI, 30% Effort, direct $1,154,036 direct, $1,759,904 total.
9/14-8/16	NIH 1 R01 DK102429-01 Role of Proximal tubule NHE3 in Angiotensin II-induced hypertension. J. Zhuo PI, R Roman Co-I, 10% effort. $491,228 direct $746,666 total.
6/14-5/18	NIH 1 R01 DK099276-01 Primary Cilia and modulation of the renal microcirculation. R. Liu PI, $995,064, R.Roman Co-I, 10% effort, subcontract $198,280 direct, $297,420 total.
1/16-12/18	NIH 1R21AG050049-01A1 Animal model of impaired autoregulation for study of age related vascular cognitive impairment. F.Fan PI, $275.000, R.Roman Co-I, 5% effort direct, $419,375 total
5/16-9/16	Renal and cardioprotective effects of a tRNA inhibitor. BiCon International R.Roman, PI $100,000.
7/17-719	Neuroprotective Effects of SGLT2 inhibitor in diabetes. Taisho Pharmaceutical Corp, R.Roman, F. Fan, Co-PIs.

PATENTS

1. A Baron, DR Hathaway, M Mistry, RJ Roman. Compositions for the treatment and prevention of nephropathy WO paten 2,004,056.317, 2004.

2. HJ Jacobs, RJ Roman, SH. Methods and compositions for pharmacological and toxicological evaluation of test agents EP Patent 1,487,261, 2008.

3. RJ Roman, JR Falck, M Alonso-Galicia, ER Jacobs, DR Harder. 20-HETE antagonists and agonists. US Patent 6,395,781, 2002.

4. RJ Roman, JR Falck, M Alonso-Galicia, ER Jacobs, DR Harder. 20-HETE antagonists and agonists. US Patent 6,596,769, 2003.

5. S Ledbetter, R. Roman. Use of TGFb antagonists to treat or prevent loss of renal function. WO Patent 2,001,066,140, 2001.

6. HJ Jacob, RJ Roman, M Nobrega. Rat model of diabetic nephropathy. US Patent 7,507,871, 2009, WO Patent 2,005,009,119, 2005.

7. RJ Roman, AJ Dahly-vernon, M Sharma. Method for treating renal disease. EP Patent 2,029,131, 2009.

8. WE Sweeney, ED Avner, RJ Roman. Methods of modulating cell proliferation and cyst formation in polycystic kidney and liver diseases. EP patent 2,061,450. 2009.

10. RJ Roman, A Greene, S Amaral, G Scicli, SL Brown, P Chen, M Guo. Methods of modulating angiogenesis and cancer cell proliferation. EP Patent 1,682,153, 2006. WO Patent 2,005,046,658, 2005.

11. RJ Roman, KG Maier Fluorescent HPLC assay for 20-hete and other P-450 metabolites of arachidonic acid. US Patent 6,764,855, 2004. EP Patent 1,410,043, 2004, 2005

12. Sweeney, WE, Avner ED, Roman RJ. Methods of muculating cell proliferation and cyst formation in polycystic kidney and liver disease. US Patent 8,846,746, 2014.

13. N Kojima, RJ Roman, N Miyata, T Takahashi, H Tomoike, T Takeda. Combinations of SGLT2 inhibitors and antihypertensive drugs. US Patent 9,320, 727, 2016.

AWARDS AND HONORS

Last 5 years UMC

2009 Gold Research Excellence Award- Univ. of Mississippi Medical Center

2014 Platinum Research Excellence Award, >$5,000,000- Univ of Mississippi Medical Center

2015 Billy S. Guyton Distinguished Professor

Previous MCW

1986-1991 Established Investigator American Heart Association

1997-2000 Program Committee APS

1998 Lewis Dahl Lecture-American Heart Association

2001 Starling Lecture -American Physiological Society

2002-2005 Program Representative, Water and Electrolyte Section of American Physiological Society

PROFESSIONAL SOCIETIES

American Society of Nephrology
International Society of Nephrology
American Society of Physiology
Electron Microscopy Society of America
Society for Experimental Biology and Medicine
Tau Beta Pi
James Slade Scholar - Rutgers University
Established Investigator - American Heart Association
Fellow - Council for the Kidney in Cardiovascular Diseases
Fellow Council on High Blood Pressure Research
Microcirculatory Society
American Society of Hypertension

REVIEW ACTIVITIES

Last 5 years UMC

Permanent member NIH KUMB Study Section 2010-2017

Permanent member American Heart Association Cardiorenal 1 Study Section 2012-2016

Previous- MCW

Permanent Member NIH Cardiovascular-Renal Study Section 1994-1999.
NIH Cardiovascular A (Ad hoc)
NIH O'Brien Center Review Committee 2002-2003, 2007
NIH PKD Center Grants Review 2005, 2007
NIH NHLBI Special Emphasis Panels- PPGs 2010, 2009, 2007, 2005, 2000, 1999
NIH Technology and Innovation Special Study Section 2 (Ad hoc)
American Heart Association CardioRenal Study Section 1991-1995
Veterans Administration Merit Review-Nephrology 1992-1995

Editorships, Editorial Boards

UMC - Last 5 years

Associate Editor: Hypertension. 2007- 2012.
Associate Editor: Physiological Genomics 2015-present
Editorial board: Hypertension. 1991-1995, 2002-2007, 2008-2017

Previous - MCW

Associate Editor Physiological Genomics 2003-2009.

Associate Guest Editor Hypertension, High blood pressure council meeting edition, 2000-2003.

Associate Editor American Journal Physiology Heart and Circ Physiology 1998-2003.

APS Program Committee 1996-1999.

Editorial board Am J. Physiol., Regulatory, Integrative and Comparative Section 1991-2008.

Editorial board Am. J. Physiol., Renal, Fluid and Electrolyte Section, 1992-1996; 1998-2008.

Editorial board Am. J. Physiol., Physiological Genomics, 1999-2004.

Editorial board Am. J. Hypertension 1996-present

Regular Reviewer for:

Am. J. Physiol., Heart and Circulatory; Regulatory and Integrative; Physiological Genomics and Fluid and Electrolyte Sections.

Hypertension

J. Pharmacol. Exp. Ther.

J Cardiovascular Pharmacology

Circ. Res.

Proc. Soc. Exp. Biol.

J. Lab. Clin. Med.

J. Clin. Invest.

Am. J. of Med.

J. of Am. Soc. of Nephrology

Kidney International

J. Vascular Res.

Europ. J. Pharmacol.

PLOS 1

INVITED TALKS

Last 5 years UMC- *Bold= State of the Art Lectures- National Meetings

9/17 **AHA High Blood Pressure Council Meeting, San Francisco, CA, Role of Adducin in Hypertension-Induced Renal Injury.**

11/17 Am Society of Nephrology Meeting, New Orleans, LA. Genetic Basis of Impaired autoregulation and the development of CKD

10/16 **Department of Nephrology, Fudan Universtiy Medical School, Shanghai, China CYP eicosanoids in Hypertension, AKI, and PKD**.

10/16 **Microcirculation Institute, Peking Union Medical School, Beijing, China. Role of 20-HETE in cerebral vascular dysfunction and the development of cognitive impairment**

and dementia with aging and hypertension.

10/16 **2016 International Symposiu on Polyunsaturated Fatty Acid and Metabolism, Tianjin Medical University, Tianjin, China. CYP Eicosanoids in the Pathogenesis of Renal, Cardiovascular and Proliferative Diseases.**

6/16 **Renal Hemodynamics FASEB Conference, Big Sky, Montana, Genetic Basis of Impaired autoregulation and the pathogenesis of chronic kidney disease.**

3/16 **Winter Eicosanoid Meeting, Baltimore MD, CYP4A and 4F mutations and pathogenesis of neurodegenerative disease**.

11/15 Department of Medicine Nephrology Univ of Virginia, Charlotteville VA, Role of 20-HETE in the pathogenesis of hypertension and kidney disease.

9/15 Department of Physiology and Pharmacology, Univ of Tennessee Memphis, TN Genetic basis of altered myogenic response and hypertension induced renal and cerebral end organ damage.

5/15 Department of Physiology and Pharmacology, Univ of South Florida, Tampa, FL Genetic basis of altered myogenic response and hypertension induced renal and cerebral end organ damage

3/15 Departments of Physiology and Medicine, Univ of Florida, Gainesville, FL. Genetic Basis of Impaired autoregulation and renal and cerebral vascular disease. Role of 20-HETE in hypertension, PKD and AKI.

10/14 Department of Medicine, Yale Univ School of Medicine, New Haven CT. Role of 20-HETE in kidney disease.

9/14 Department of Pediatric Nephrology and Physiology. Medical College of Wisconsin, Milwaukee, WI Role of 20-HETE in hypertension, CKD and PKD. .

7/14 Department of Physiology and Pharmcology, Tulane Univ School of Medicine, New Orleans, LA 20-HETE in the pathogenesis of kidney disease and vascular dementia.

6/14 Department of Anatomy and Neuroscience, Univ of Mississpi Medical Center. Genetic basis of impaired autoregulation and neurodegenerative disease.

3/14 **Winter Eicosanoid Meeting, Baltimore MD. Renoprotective Actions of 20-HETE.**

2/14 Department of Medicine, Univ of MS Medical Center. Chairman's Research Conference.Eicosanoids in the pathogenesis of hypertension, stroke, kidney disease and cancer.

11/13 **American Society of Nephrology, Atlanta GA, 20-HETE and Hypertension**.

11/13 Vascular Biology Center, Georgia Reagents Univ. Augusta GA. 20-HETE in the pathogenesis of hypertension, stroke, kidney disease and cancer.

6/13 Department of Physiology, Univ of Southern Alabama, Mobile GA. 20-HETE in the pathogenesis of hypertension, stroke, kidney disease and cancer.

11/11 **American Society of Nephrology Meeting, Philadelphia, PA. Medullary circulation in acute renal failure.**

11/11 **Dept of Pharmacology, Virginia Commonwealth University, Distinguished Lecture in Bioactive Lipids; 20-HETE in the pathogenesis of hypertension: Genes to function.**

2/11 Hypertension Division, Henry Ford Hospital, Detroit MI. Role of 20-HETE in the control of renal tubular and vascular function.

2/11 Dept of Physiology, Medical College of Wisconsin, Milwaukee, WI. Genetic basis of diabetic and hypertension nephropathy.

2/11 Dept of Physiology, Univ of Toledo School of Medicine Toledo, OH. Genetic basis of impaired autoregulation of renal and cerebral blood flow in FHH rats.

11/10 **American Society of Nephrology Meeting, Denver CO. 20-HETE, Hypertension and Renal Disease.**

10/10 Dept of Physiology, Univ of MS Medical Center, Jackson, MS. Metalloprotease inhibitors for the treatment of hypertension and diabetic nephropathy.

9/10 Natural Products Center, Oxford, MS. Metalloprotease inhibitors for the treatment of hypertension and diabetic nephropathy.

9/10 Dept of Pharmacology, Univ of Tennessee Center for Health Science, Memphis, TN.Genetic basis of hypertension and diabetic nephropathy.

6/10 **FASEB Conference of Renal Hemodynamics. Saxton, River, VT. Genetic basis for lack of autoregulation and the development of renal disease in FHH rats.**

8/10 Department of Nephrology, Northwestern Univ. Genetic basis of hypertension and diabetic nephropathy.

2/09 Department of Physiology, Univ of MS Medical Center, Jackson, MS. P450 eicosanoids in the development of hypertension, renal disease and cancer.

Previous MCW

12/08 Dept of Physiology, Georgetown Univ. Genetic basis of renal disease

11/08 **Jackson Hypertension Meeting. Congenic and Consomic rats to unravel the genetic basis of hypertension and renal disease**.

12/07 Dept of Pharmacology, Medical College of New York, Vahalla, NY. Genetic basis of hypertension and renal disease.

6/07 Am Society of Diabetes Meeting, Chicago Ill. T2DN rat to uncover the genetic basis of diabetic nephropathy.

12/06 **NIEHS- Mouse Consortium on Pharmacogenomics, Portland Oregon. Genetic Diversity to Improve the Predictive Power of Preclinical discovery and safety testing in drug development.**

11/05 Merck Sharpe and Dohme Corp, Rahway, NJ

11/05 Dept of Endocrinology, Univ of Indiana School of Medicine, Indianapolis, IN

11/04 Am Soc of Nephrology, St. Louis Mo. P450 metabolites in the control of renal function.

6/04 **FASEB Conference on Renal Hemodynamics, Georgia, P450 metabolites in the control of renal function.**

4/04 Depts of Physiology and Pharmacology. Univ of Tennessee Center for Health Sciences. Chromosomal Substitution and highthroughput phenotyping for discovery of Genes of Hypertension. P450 eicosanoids in the pathogenesis of hypertension and stroke.

1/04 NASA Research Center, Morehouse Univ School of Medicine, Alanta, Georgia Chromosomal Substitution and highthroughput phenotyping for discovery of Genes of Hypertension.

6/03 Dept of Pharmacology, Univ of South Carolina School of Medicine, Charleston, SC. P450 eicosanoids in the pathogenesis of hypertension and stroke.

6/03 Dept of Physiology, Univ of Cincinnati School of Medicine, Cincinnatti, OH. P450 eicosanoids in the pathogenesis of hypertension and stroke.

4/03 **InterAmerican Society of Hypertension. San Antonio, TX. P450 metabolites of AA in regulation of renal function and hypertension.**

2/03 Dept of Pharmacology, NY Medical College, Valhalla, NY.

6/02 **Danish Society of Pharmacology. Odense Denmark. Genomics based drug discovery.**

5/02 **Coldspring Harbor Symposium on the Cardiovascular System. Cold Spring Harbor, NY. Consomic rats and high throughput physiology for discovery of the genetic basis of cardiovascular disease.**

2/02 Cardiovascular Research Center, Univ of Virgina Medical School

3/01 **E. Starling Lecturer, American Physiologic Society, Orlando, Fl. P450 eicosanoids in the control or renal function, vascular tone and arterial pressure.**

12/00 **Consortium for Southeastern Hypertension Control, Savannah GA, P450 eicosanoids in the control of vascular tone.**

11/00 **Jackson Cardiovascular-Renal Meeting, Resetting of Pressure Natriuresis in hypertension: role of P450 metabolites of AA, Jackson MS**.

11/00 **American Society of Nephrology, Toronto, Canada, Effects of 20-HETE on renal function**.

8/00 **International Society of Hypertension, P450 metabolites of arachidonic acid in the control of vascular tone**

1/00 Department of Medicine, Sendai, Japan P450 eicosanoids in the development of hypertension.

1/00 Tashio Co., Dept of Internal Medicine, Omiya, Japan,

12/99 Dept of Bioinorganic Chemistry, Washington Univ, St. Louis

9/99 Merck, West Point, PA.

5/99 **Am. Soc. Hypertension, NY, P450 eicosanoids and hypertension**.

4/99 FASEB 99 Symposium, Washington DC, Role of P450 eicosanoids in the control of renal function

3/99 **Winter Eicosanoid Meeting, Baltimore MD, P450 eicosanoids in hypertension**.

2/99 Dept of Physiology, Univ of Texas, San Antonio, TX

12/98 Dept of Pharmacology, Univ of Saskatoon Medical School, Saskatoon, Canada

11/98 **1998 Dahl Memorial Lecturer: American Heart Association, Dallas, TX**

11/98 Department of Physiology, University of North Carolina, Chapel Hill, NC

6/98 **FASEB Symposium. Saxons River, VT, P450 metabolites of arachidonic acid and the control of renal function.**

6/98 **Mexican Society of Hypertension, Mexico City, P450 eicosanoids as mediators of the vasodilator actions of NO.**

11/97 **Am Soc. Nephrology, San Antonio, Texas. P450 eicosanoids in the control of renal function and arterial pressure.**

9/97 Department of Pharmacology, Medical College of NY, Valhalla, NY

9/97 **High Blood Pressure Council, Washington, DC. P450 eicosanoids in the control of renal function and arterial pressure**

8/97 **FESEB Meeting, San Paulo, Brazil. P450 NO interaction in the regulation of renal function and vascular tone.**

4/97 Department of Physiology and Pharmacology, St Louis Univ. St. Louis, MO.

2/97 Department of Pharmacology, Univ. of British Columbia, Vancouver, BC.

1/97 Department of Physiology, Georgetown University Medical School, Washington, D.C.

1/97 Department of Obstetrics, Univ. of Illinois Medical Center, Chicago, IL.

9/96 Department of Physiology, Univ. of Nebraska Medical Center, Omaha, NB.

3/96 Department of Physiology, Univ. of Kentucky Med. Center, Lexington, KY.

11/95 Department of Physiology, Univ. of Tennessee Med. Center, Memphis, TN

7/95 **International Society of Nephrology, Madrid, Spain. P450 metabolites of arachidonic acid in the regulation of tubuloglomerular feedback and autoregulation of renal blood flow.**

6/95 **FASEB Conference on Renal Hemodynamics. Saxton River, VT, P450 eicosanoids in the regulation of renal vascular tone**

5/95 **American Society of Hypertension. New York. Altered renal medullary function in hypertension.**

3/95 Departments of Physiology and Pediatrics, Tulane Medical School, New Orleans, LA.

11/94 External Advisory Board, Hypertension Program Project. Henry Ford Hospital, Detroit, MI.

6/94 **FASEB Conference on Vascular Smooth Muscle, Copper Mountain, CO. P450 eicosanoids and the control of vascular tone**.

5/94 Department of Pharmacology, New York Medical College, Valhalla, NY.

5/94 **American Society of Hypertension, New York. P450 eicosanoids in the control of vascular tone: Implications in hypertension**.

4/94 **Danish Society of Hypertension, Copenhagen. Role of the kidney in genetic hypertension**.

2/94 Department of Physiology, University of Louisville, Louisville, KY.

5/93 **American Society of Hypertension, Role of P450 metabolites of arachidonic acid in resetting renal function in genetic models of hypertension**.

4/93 **Hypertension Investigators Meeting, Jacksonville, FL. Role of P450 metabolites of arachidonic acid in the control of renal vascular tone.**

2/93 **Symposium on Renal Circulation, Heidelberg, Germany, Mechanisms of Pressure Natriuresis.**

1/93 **Prostaglandins Winter Conference, Keystone, CO. Role of P450 metabolites of arachidonic acid in the control of renal tubular and vascular function.**

7/92 **Summer FASEB Conference on Renal Hemodynamics, Saxtons River, VT. Role of P450 in the control of renal vascular tone, Saxtons River, VT**.

3/92 **Chairman: FASEB Symposium on Long-Term control of sodium excretion, Anaheim, CA.**

2/91 **Gordon Conference on Kinins, Ventura, CA**.

2/90 **Chairman: Symposium Control of the Renal Microcirculation, American Society of Nephrology, Washington, DC.**

5/90 Department of Pharmacology, New York Medical College, Valhalla, NY.

5/90 **Symposium, Cardiovascular and Renal Effects of Nonpeptide AII Antagonists, American Society of Hypertension, New York.**

11/89 Department of Physiology, University of Mississippi Medical Center, Jackson, MS.

9/89 Cardiovascular Section, DuPont Corp., Wilmington, DE.

8/89 Renal-Cardiovascular Section, Abbott Laboratories, Gurnee, IL.

6/89 FASEB Conference on Renal Hemodynamics, Saxtons River, VT.

6/89 Department of Physiology, Case Western Reserve University, Cleveland, OH.

5/89 **Symposium, Kidney in Hypertension, American Society of Hypertension Meeting, New York, NY.**

2/89 Department of Cardiovascular Pharmacology, Monsanto Corporation, St. Louis, MO.

1/89 Department of Nephrology, Medical College of Wisconsin, Milwaukee, WI.

1/89 Department of Nephrology, Mayo Clinic, Rochester, MN.

11/88 Department of Cardiovascular Pharmacology, DuPont Corporation, Wilmington, DE.

11/88 Department of Pharmacology, New York Medical College, Valhalla, NY.

5/88 Department of Physiology, University of South Dakota Medical School, Vermillion, SD.

4/88 Co-Chairman, Renal Hemodynamics Session, FASEB Meeting, Las Vegas, NV.

1/88 Department of Physiology, Mayo Clinic, Rochester, MN.

11/87 Department of Pharmacology, Medical College of Wisconsin, Milwaukee, WI.

10/87 Hypertension Research Division, Henry Ford Hospital, Detroit, MI.

9/86 Hypertension Research Division, Henry Ford Hospital, Detroit, MI.

5/86 Hypertension Research Division, University of Alabama at Birmingham, Birmingham, AL.

5/86 Nephrology Division, University of Alabama at Birmingham, Birmingham, AL.

4/86 **FASEB Symposium, Control of Arterial Pressure, St. Louis, MO**.

11/85 **Chairman, Renal Hemodynamics Session, Fall APS Meeting, Niagara Falls, NY**.

9/85 Department of Physiology, University of Tennessee, Center for Health Science, Memphis, TN.

5/85 Cardiovascular Section, Searle Corporation, Skokie, IL.

RESEARCH INTERESTS

Mechanisms of Diabetic Nephropathy

MMPs, TGFb and 20-HETE in the pathogenesis of renal disease

Genetic basis of FSGS

Role of the kidney in the regulation of arterial pressure

Mechanism of pressure diuresis

Factors resetting kidney function in hypertension

Control of vasa recta hemodynamics

Autoregulation of RBF and GFR

Influence of kinins, eicosanoids, NO, and angiotensin II on renal tubular and vascular function

Laser-Doppler flowmetry of tissue blood flow

Electron probe and microfluorescence analysis of isolated tubular and vascular cells

Cytochrome P450 metabolites in control of vascular tone, renal function and in the pathogenesis of hemorrhagic and ischemic stroke.

Regulation of K and Ca channels in vascular smooth muscle

Molecular genetics of hypertension

NO and eicosanoids in the control of cerebral blood flow

Genetics of Hypertension, stroke, renal disease and diabetes.

Pharmaco and Toxicogenomics

Physiologic Genomics

EXPERIMENTAL TECHNIQUES

Renal clearance and micropuncture

Laser-Doppler flowmetry renal and cerebral circulations.

Videomicroscopic studies of the renal and cerebral circulation

Isolated perfused juxtamedullary vascular preparation

Isolated perfused tubules and arterioles

Patch clamp studies of ion channels in vascular smooth muscle and renal epithelial cells

Chronic studies blood pressure and flow in conscious animals

Radioimmunoassay and radiochemical assays of eicosanoids, IP3, DAG, NO, AII,

Fluorescence measurements of intracellular Ca, pH, NO, Oxygen radicals and Na

Molecular studies of ion channels and P450 gene expression

Molecular Genetics of Hypertension and renal disease

Expression arrays, proteomics

LS/MS/MS analysis of eicosanoids

Expression profiling

High throughput phenotyping strategies

Creation of congenic and consomic rat strains for positional cloning and disease models

PUBLICATIONS

1. Roman, R.J., and M.L. Kauker. Renal tubular transport of 3H-digoxin in saline diuretic rats as evaluated by micropuncture. Circ. Res. 38:185-191, 1976.

2. Roman, R.J., J.R. Carter, W.C. North and M.L Kauker. Renal tubular site of action of fluoride in Fisher 344 rats. Anesthesiology 46:260-264, 1977.

3. Roman, R.J., and M.L. Kauker. Renal effect of prostaglandin synthetase inhibition in rats: micropuncture studies. Am. J. Physiol. 235 (Renal Fluid Electrolyte Physiol. 4):F111-F118, 1978.

4. Roman, R.J., M.L Kauker, N.A. Terragno and P.Y.-K Wong. Inhibition of renal prostaglandin synthesis and metabolism by indomethacin in rats. Proc. Soc. Exp. Biol. Med. 159:165-170, 1978.

5. Roman, R.J., J.V. Bonventre and C.P. Lechene. A fluorometric assay for urea in urine, plasma, and tubular fluid. Anal. Biochem. 98:136-141, 1979.

6. Roman, R.J., A.W. Cowley, Jr., and C.P. Lechene. Water diuretic and natriuretic effect of clonidine in the rat. J. Pharmacol. Exp. Ther. 211:385-393, 1979.

7. Roman, R.J., and C.P. Lechene. Electron probe microanalysis in health research. In: Yearbook of Science and Technology. New York: McGraw-Hill, pp. 52-61, 1980.

8. Bonventre, J.V., R.J. Roman and C.P. Lechene. Effect of urea concentration of pelvic fluid on renal concentrating ability. Am. J. Physiol. 239 (Renal Fluid Electrolyte Physiol. 8):F609-F618, 1980.

9. Roman, R.J., and C.P. Lechene. Meclofenamate and urine concentration with and without exposure of the renal papilla. Am. J. Physiol. 240 (Renal Fluid Electrolyte Physiol. 9):F423-F429, 1981.

10. Roman, R.J., and C.P. Lechene. Prostaglandin E_2 and $F_{2}\alpha$ reduces urea reabsorption from the rat collecting duct. Am. J. Physiol. 241 (Renal Fluid Electrolyte Physiol. 10):F53-F60, 1981.

11. Roman R.J., J.V. Bonventre, P. Silva and C.P. Lechene. Sodium ortho-vanadate diuresis in rats. J. Pharmacol. Exp. Ther. 218:168-174, 1981.

12. Mroz, E.A., R.J. Roman and C.P. Lechene. Fluorescence assay for picomole quantities of ammonia. Kidney Int. 21:524-527, 1982.

13. Cowley, A.W. Jr., and R.J. Roman. Renal dysfunction in essential hypertension - implications of experimental studies. Am. J. Nephrol. 3:59-72, 1983.

14. Roman, R.J., and M. Hatchell. Energy dispersive X-ray microanalysis of aqueous biologic samples on bulk supports. J. Electron Microsc. Techniques 1:141-150, 1984.

15. Roman, R.J., M. Skelton and C. Lechene. Prostaglandin-ADH interactions on the renal handling of calcium and magnesium. J. Pharmacol. Exp. Ther. 230:295-301, 1984.

16. Roman, R.J., and M. Hatchell. Energy-dispersive X-ray microanalysis of aqueous biologic samples on bulk supports. Edax Editor 14:30-34, 1984.

17. Zawieja, D., B.J. Barber and R.J. Roman. Analysis of picogram quantities of protein in subnanoliter size samples. Anal. Biochem. 142:182-188, 1984.

18. 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.

19. 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):199-205, 1985.

20. Carmines, P.K., P.D. Bell, R.J. Roman, J. Work and L.G. Navar. Prostaglandins in the sodium excretory response to altered renal arterial pressure in dogs. Am. J. Physiol. 248 (Renal Fluid Electrolyte Physiol. 17):F8-F14, 1985.

21. Hartupee, D.A., R.J. Roman and C. Lechene. Role of renal prostaglandins in the fall in urine osmolality due to papillary micropuncture. Prostaglandins 29:981-990, 1985.

22. Osborn, J.L., R.J. Roman and R.W. Harland. Mechanisms of antinatriuresis during low frequency renal nerve stimulation in anesthetized dogs. Am. J. Physiol. 249 (Reg. Integ. Comp. Physiol. 18):R360-367, 1985.

23. Roman, R.J., and C. Smits. Laser Doppler determination of papillary blood flow in young and adult rats. Am. J. Physiol. 251 (Renal Fluid Electrolyte Physiol. 20):F115-F124, 1986.

24. Roman, R.J., and F. Sias. Network computer analysis of the human kidney. Math. Modelling 7:1045-1069, 1986.

25. Roman, R.J. Abnormal renal hemodynamics and pressure diuresis response in Dahl salt-sensitive rats. Am. J. Physiol. 251 (Renal Fluid Electrolyte Physiol. 20):F57-F65, 1986.

26. Smits, G., R.J. Roman and J. Lombard. Calibration of laser-doppler flowmeter for measurement of microvascular flows. J. Appl. Physiol. 61:666-671, 1986.

27. Roman, R.J. Pressure diuresis mechanism in the control of renal function and arterial pressure. Fed. Proc. 45:2878-2884, 1986.

28. 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. Amsterdam: Elsevier Science Publishers B.V., 1986, pp. 295-314.

29. Roman, R.J., and J.L. Osborn. Renal function and sodium balance in conscious Dahl S and R rats. Am. J. Physiol. 252 (Reg. Integ. Comp. Physiol. 21):R833-R841, 1987.

30. Roman, R.J. Altered pressure-natriuresis relationship in young spontaneously hypertensive rats. Hypertension 9 (suppl. III):130-136, 1987.

31. 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.

32. Kalkoff, R.K., D.E. Yorde, R.J. Roman, K.A. Siegesmund and R.F. Dragen. Fluctuations of alpha cell calcium, potassium, and sodium during amino acid perfusion of rat pancreatic islets. Endocrinology 121:429-431, 1987.

33. Roman, R.J., M.L. Kaldunski, D.L. Mattson, M. Mistry and A. Nasjletti. Influence of renal prostanoids on renal function of Doca-Salt hypertensive rats. Hypertension 12:287-294, 1988.

34. Roman, R.J., M.L. Kaldunski, A.G. Scicli and O.A. Carretero. Influence of kinins and angiotensin II on the regulation of papillary blood flow. Am. J. Physiol. 255 (Renal Fluid Electrolyte Physiol. 24):F690-F698, 1988.

35. Roman, R.J., and M.L. Kaldunski. Papillary blood flow during the development of hypertension in the spontaneously hypertensive rat. Hypertension 11: 657-663, 1988.

36. Osborn, J.L., J. Ewens and R.J. Roman. Role of the renal nerves in the development of hypertension in the Dahl S rat. Hypertension 11: 523-527, 1988.

37. Roman, R.J., J.H. Lombard, A.W. Cowley, Jr., and J. Garcia-Estañ. Pressure-diuresis in volume-expanded rats: Cortical and medullary hemodynamics. Hypertension 12:168-176, 1988.

38. Harder, D.R., C. Sanchez-Ferrer, J.H. Lombard and R.J. Roman. Pressure-dependent activation in renal arteries and arterioles. In: Proceedings of the 2nd Int. Symposium on Resistance Arteries. Edited by W. Halpern. New York: Perinatology Press, 1988, pp. 369-375.

39. Roman, R.J. Pressure-diuresis in volume-expanded rats: Tubular reabsorption in superficial and deep nephrons. Hypertension 12:177-183, 1988.

40. Garcia-Estañ, J., and R.J. Roman. Role of renal interstitial pressure in the pressure-natriuresis response. Am. J. Physiol. 256 (Renal Fluid Electrolyte Physiol. 25):F57-F63, 1989.

41. Sanchez-Ferrer, C., R.J. Roman and D.R. Harder. Pressure-dependent contraction of rat juxtamedullary afferent arterioles. Circ. Res. 64: 790-798, 1989.

42. Harder, D.R., K. Kauser, R.J. Roman and J.H. Lombard. Mechanisms of pressure-induced myogenic activation of cerebral and renal arteries: role of the endothelium. J. Hypertens. 7 (Suppl. 4):S11-S15, 1989.

43. Garcia-Estañ, J., R.J. Roman, J. Garancis and E. Lianos. Effect of complement depletion on glomerular eicosanoid synthesis and renal hemodynamics in nephrotoxic serum nephritis. J. Lab. Clin. Med. 114:389-393, 1989.

44. Garcia-Estañ, J., K. Takezawa and R.J. Roman. Natriuretic effect of atriopeptin III in rats with papillary necrosis. Am. J. Physiol. 257 (Renal Fluid Electrolyte Physiol. 26):F859-F865, 1989.

45. Kauker, M.L., E.T. Zawada and R.J. Roman. Nisoldipine influence on renal excretory and hemodynamic functions. In: Diuretics III: Chemistry, Pharmacology and Clinical Applications. Edited by J.B. Puschett and A. Greenberg. Amsterdam: Elsevier Scientific Publishing Co., 1989, pp. 282-284.

46. Krieger, J.E., A.W. Cowley, Jr., and R.J. Roman. Hemodynamics, fluid volume and hormonal responses to chronic high salt intake in dogs. Am. J. Physiol. 257 (Heart Circ. Physiol. 26):H1402-H1412, 1989.

47. Kauser, K., G.M. Rubanyi, R.J. Roman and D.R. Harder. Pressure-induced endothelium dependent contraction in cat cerebral arteries. In: Neurotransmission and Cerebrovascular Function. Edited by J. Seylaz and E.T. MacKenzie. New York: Excerpta Medica, 1989, pp. 71-76.

48. Harder, D.R., K. Kauser, J.H. Lombard, R.J. Roman and G. Rubanyi. Pressure-induced activation of renal and cerebral arteries depends upon an intact endothelium. In: Endothelium-derived Contracting Factors. Edited by G.M. Rubanyi and P. Vanhoutte. Basel: Karger, Volume 2, 1990, pp. 8-13.

49. Roman, R.J. Alterations in renal medullary hemodynamics and sodium excretion in genetic hypertension. Am. J. Hypertens. 3:893-900, 1990.

50. Roman, R.J. Renal blood flow. Developments in cardiovascular medicine 107:289-304, 1990,

51. Cowley, A.W. Jr., and R.J. Roman. Control of blood and extracellular volume. In: Bailliere's Clinical Endocrinology and Metabolism, Vol. 3(2), Chapter 4. London: Harcourt Brace Jovanovich Publishers, 1990, pp. 331-369.

52. Roman, R.J. and E. Lianos. Influence of renal prostaglandins on papillary blood flow, renal interstitial pressure and the pressure-natriuretic response. Hypertension 15:29-35, 1990.

53. Tyml, K., R.J. Roman and J.H. Lombard. Blood flow measurements in skeletal muscle. In: Laser-Doppler Flowmetry. Edited by A.P. Shepard and P.A. Oberg. Norwell, MA: Kluwer Academic Press, 1990, pp. 215-226.

54. Roman, R.J. Blood flow measurements in the renal circulation. In: Laser-Doppler Flowmetry. Edited by A.P. Shepard and P.A. Oberg. Norwell, MA: Kluwer Academic Press, 1990, pp. 289-304.

55. Greene, A., J.H. Lombard, R.J. Roman and A.W. Cowley, Jr. Role of volume expansion in the development of Dahl S hypertension. Am. J. Physiol. 258 (Heart Circ. Physiol. 27):H508-H514, 1990.

56. Garcia-Estañ, J., and R.J. Roman. Role of renal interstitial hydrostatic pressure in the natriuretic response to atriopeptin III. Am. J. Physiol. 258 (Reg. Integ. Comp. Physiol. 27):R1333-R1339, 1990.

57. Masters, B.S., J.E. Clark, L.J. Roman, R.J. Roman, K.J. Griffin, A.S. Muerhoff and E.F. Johnson. Functional and molecular biological aspects of extrahepatic w-hydroxylation of fatty acids and eicosanoids. In: Proceedings of the VIII International Symposium of Microsomes and Drug Oxidations, Stockholm, 1990

58. Gans, K.R., W. Galbraith, R.J. Roman, S.B. Haber, J.S. Kerr, W.K. Schmidt, C. Smith, W.E. Hewes, R.J. Roman and N.R. Ackerman. Anti-inflammatory and safety profile of DuP 697, a novel orally effective prostaglandin inhibitor. J. Pharmacol. Exp. Ther. 254:180-187, 1990.

59. Gebremedhin, D., F.J. Fenoy, D.R. Harder and R.J. Roman. Enhanced myogenic response in the renal vasculature of spontaneously hypertensive rats. Hypertension 16:648-654, 1990.

60. Lombard, J.H., and R.J. Roman. Effect of hemorrhage upon skeletal muscle perfusion assessed via laser-Doppler flowmetry in spontaneously hypertensive rats. Am. J. Physiol. 259 (Heart Circ. Physiol. 28):H860-H865, 1990.

61. Mattson, D.L., H. Raff and R.J. Roman. Influence of angiotensin II on pressure-natriuresis and renal hemodynamics in volume-expanded rats. Am. J. Physiol. 260 (Reg. Integ. Comp. Physiol. 29):R1200-R1209, 1991.

62. Kauser, K., J.E. Clark, Y.H. Ma, P. Ortiz Montellano, B.S.S. Masters, D.R. Harder and R.J. Roman. Inhibitors of arachidonic acid metabolism attenuate the myogenic response in dog renal arcuate arteries. Circ. Res. 68:1154-1163, 1991.

63. Fenoy, F.J., I. Milicic, R.D. Smith, P. Wong, P.B.M.W.M. Timmermans and R.J. Roman. Effects of DuP 753 on renal function of normotensive and spontaneously hypertensive rats. J. Am. Soc. Hypertens. 4:321s-326s, 1991.

64. Fenoy, F., and R.J. Roman. Effects of volume expansion on papillary blood flow and sodium excretion. Am. J. Physiol. 260 (Renal Fluid Electrolyte Physiol. 29):F813-F822, 1991.

65. Mattson, D.L., and R.J. Roman. Role of kinins and prostaglandins in the renal hemodynamic response to captopril. Am. J. Physiol. 260 (Renal Fluid Electrolyte Physiol. 29):F670-F679, 1991.

66. Harder, D.R., and R.J. Roman. Pressure-induced activation of cerebral and renal arteries. In: Endothelial Regulation of Vascular Tone. Edited by U. Ryan and G. Rubanyi. New York: Marcel Dekker, 1991, pp. 265-271.

67. Bresnahan, B.A., R.J. Roman, W. Bagchus and E.A. Lianos. Mesangial cell immune injury: Effects of thromboxane receptor antagonism. J. Am. Soc. Nephrology 1:1041-1047, 1991.

68. Fenoy, F.J., G. Scicli, O. Carretero and R.J. Roman. Effect of angiotensin II and kinin receptor antagonists on the renal hemodynamic and excretory responses to captopril. Hypertension 17:1038-1044, 1991.

69. Roman, R.J., and M. Kaldunski. Pressure-natriuresis and cortical and papillary blood flow in inbred Dahl rats. Am. J. Physiol. 261 (Reg. Integ. Comp. Physiol. 30):R595-R602, 1991.

70. Ma, Y-H, D.R. Harder, J.E. Clark and R.J. Roman. Effects of 12-hydroxeicosatetraenoic acid (12-HETE) on isolated dog renal arcuate arteries. Am. J. Physiol. 261 (Heart Circ. Physiol. 30):H451-H456, 1991.

71. Roman, R.J., and M.L. Kaldunski. Enhanced chloride reabsorption in the loop of Henle in Dahl salt-sensitive rats. Hypertension 17:1018-1024, 1991.

72. Cowley, A.W. Jr., R.J. Roman and J.E. Krieger. Pathways linking renal excretion, arterial pressure with vascular structure and function. Clin. Exp. Pharmacol. Physiol. 18:21-27, 1991.

73. Roman, R.J., P.K. Carmines, R. Loutzenhiser and J.D. Conger. Direct studies on the control of the renal microcirculation. J. Am. Soc. Nephrology 2:136-149, 1991.

74. Harder, D.R., R.J. Roman and J.H. Lombard. Cellular and biochemical mechanisms of pressure-induced myogenic tone in arteries. In: Resistance Arteries, Structure and Function. Edited by M.J. Mulvany. Elsevier Science Publishers, 1991, pp. 178-182.

75. Masters, B.S.S., J.E. Clark, L.J. Roman, T.J. McCabe, C.B. Helm, E.F. Johnson, Y.-H. Ma, D.R. Harder and R.J. Roman. Structure-function studies and physiological roles of eicosanoids metabolized by cytochrome P-450 w-Hydroxylases. In: Prostaglandin, Leukotrienes, Lipoxins and PAF. ed. by J.M. Bailey, Plenum Press, NY, 1991 pp 59-66.

76. Hudetz, A.G., F. Fenoy and R.J. Roman. Use of fluorescently-labeled erythrocytes and digital cross-correlation for the measurement of flow velocity in the cerebral microcirculation. Microvasc. Res. 43:343-341, 1992.

77. Hudetz, A.G., R.J. Roman and D.R. Harder. Spontaneous flow oscillations in the cerebral cortex during acute changes in mean arterial pressure. J. Cereb. Blood Flow 12:491-499, 1992.

78. Fenoy, F.J., M.L. Kauker, I. Milicic and R.J. Roman. Normalization of pressure-natriuresis by nisoldipine in spontaneously hypertensive rats. Hypertension 19:49-55, 1992.

79. Fenoy, F.J., and R.J. Roman. Effect of kinin antagonists on the papillary blood flow and renal excretory responses to volume expansion. Am. J. Physiol. 263 (Reg. Integ. Comp. Physiol. 32):R1136-R1140, 1992.

80. Fenoy, F.J., E. St. Lezin, T.W. Kurtz and R.J. Roman. Genetic heterogeneity and differences in glomerular hemodynamics between inbred colonies of Munich-Wistar rats. J. Am. Soc. Nephrol. 3:66-72, 1992.

81. Gebremedhin, D., Y.-H. Ma, R.J. Roman, M. Van Rollins, J.R. Falck and D.R. Harder. Cellular mechanism of cerebral epoxyeicosatrienoic acids (EETs) on cat cerebral arterial smooth muscle. Am. J. Physiol. 263 (Heart Circ. Physiol. 32):H519-H525, 1992.

82. Lu, S.-H., R.J. Roman, D. Mattson and A.W. Cowley Jr. Renal medullary interstitial infusion of diltiazem alters sodium and water excretion in the rat. Am. J. Physiol. 263 (Reg. Integ. Comp. Physiol. 32): R1064-R1070, 1992.

83. Fenoy, F.J., I. Milicic, M. Mistry, T.E. Mecca and R.J. Roman. Effect of clintiazem on arterial pressure and renal function in normotensive and hypertensive rats. J. Pharmacol. Exp. Ther. 261:470-475, 1992.

84. Mattson, D.L., R.J. Roman and A.W. Cowley Jr. Role of nitric oxide on renal juxtamedullary blood flow and sodium excretion. Hypertension 19:766-769, 1992.

85. Imig, J.D., and R.J. Roman. Nitric oxide modulates renal vascular tone in renal preglomerular arterioles. Hypertension 19:770-774, 1992.

86. Breshnahan, B.A., S. Wu, F.J. Fenoy, R.J. Roman and E.A. Lianos. Mesangial cell immune injury: Hemodynamic role of leukocyte and platelet-derived eicosanoids. J. Clin. Invest. 90:2304-2312, 1992.

87. Yamaguchi, Y., F.J. Fenoy, R.J. Roman and A. Nasjletti. Angiotensin II influences the renal hemodynamic response to blockade of thromboxane A2 and prostaglandin H2 receptors. J. Pharmacol. Exp. Ther. 263:905-909, 1992.

88. Cowley, A.W., D.L. Mattson, F.J. Fenoy and R.J. Roman. Role of the renal medulla in the long-term control of arterial pressure. J. Hypertension. 10:S187-S193, 1992.

89. Stiemke, M.M., R.J. Roman, M. Palmer and H. Edelhauser. Sodium activity of the aqueous humor and corneal stroma of the rabbit. Exp. Eye Res. 55:428-433, 1992.

90. Harder D.R., D. Gebremedhin, Y.-H. Ma and R.J. Roman. Signal transduction responses to pressure in arterial muscle: A possible role for arachidonic acid metabolites. In: Ion Channels of Vascular and Endothelial Cells. Edited by M. Sperelakis and H. Kuriyama. New York: Elsevier Publishing Co., 1992, pp. 235-238.

91. Ma, Y.-H., D. Gebremedhin, M.L. Schwartzman, J.E. Clark, D.R. Harder, B.S. Masters and R.J. Roman. 20-HETE is an endogenous vasoconstrictor of dog renal arcuate arteries. Circ. Res. 72:126-136, 1993.

92. Gebremedhin, D., Y-H. Ma, J.D. Imig, D.R. Harder and R.J. Roman. Role of cytochrome P450 in the enhanced tone in the juxtamedullary vasculature of SHR. J. Vasc. Res. 30:53-60, 1993.

93. Imig, J.D., D. Gebremedhin, D.R. Harder and R.J. Roman. Role of nitric oxide in the renal vasoconstrictor response to erythrocytes. Am. J. Physiol. 264 (Heart Circ. Physiol. 33):H190-H195, 1993.

94. Roman, R.J., and D.R. Harder. Cytochrome P450 metabolites of arachidonic acid in the control of renal vascular tone. In: Mechanoreception by the Vascular Wall. Edited by G.M. Rubanyi. Mount Kisco, NY: Futura Pub. Inc., 1993, pp. 155-172.

95. Mattson, D.L., R.J. Roman and A.W. Cowley. Autoregulation of blood flow in different regions of the kidney. Am. J. Physiol. 264 (Reg. Integ. Comp. Physiol. 33):R578-R583, 1993.

96. Imig, J.D., J.R. Falck and R.J. Roman. Elevated renovascular tone in young spontaneously hypertensive rats: Role of cytochrome P450. Hypertension. 22:357-364, 1993.

97. Lu, S., D.L. Mattson, C.B. Becker, R.J. Roman, and A.W. Cowley. Assessment of changes in intrarenal blood flow in conscious rats using laser-Doppler flowmetry. Am. J. Physiol. 264 (Renal Fluid Electrolyte Physiol. 33):F956-F962, 1993.

98. Masters B.S.S, J.E. Clark, L.J. Roman, M. Nishimoto, T.J. McCabe, P.R. Ortiz de Montellano, C.G. Plopper, Y-H Ma, D.R. Harder, and R.J. Roman. Functional aspects of eicosanoid hydroxylation by lung and kidney cytochromes P450. Expression of cDNAs in mammalian cells and E. coli. J Lipid Mediators 6:353-360, 1993.

99. Roman, R.J., Y-H Ma, B. Frohlich, and B. Markham. Clofibrate prevents the development of hypertension in Dahl salt-sensitive rats. Hypertension 21:985-988, 1993.

100. Gebroth J.R., R.M. Effros, R.J. Roman, and E.R. Jacobs. Regulation of intracellular PH and calcium in type II pulmonary epithelial cells. Am J. Physiol. 264 (Lung and Respiration 8): L448-L457, 1993.

101. Harder, D.R., D. Gebremedhin, and R.J. Roman. Influence of physical and enviromental factors on ion channels in arterial muscle. In: Ion flux in pulmonary vascular control. ed. by E.K. Weir, Plenum Pub. Co., NY, 1993, pp. 105-110.

102. Roman, R.J., and D.R. Harder. Cellular and ionic signal transduction pathways for mechanical activation of renal arterial vascular smooth muscle. J. Am. Soc. Nephrol. 4:986-996, 1993.

103. Roman, R.J., and A.-P. Zou. Influence of the renal medullary circulation on the control of sodium excretion. Am. J. Physiol. 265 (Reg. Int. Comp. Physiol. 34):R963-R973, 1993.

104. Roman, R.J. Autoregulation of renal and cerebral blood flow. In: Hypertension Primer. ed by J.L. Izzo and H.R. Block. American Heart Association, Dallas 1993, pp. 85-87.

105. Zou, A.-P., Y.-H. Ma, P.R. Ortiz de Montellano, J.E. Clark, B.S. Masters, and R.J. Roman. Effects of 17-ODYA, a suicide-substrate inhibitor of P450 fatty acid w-hydroxylase on renal function of rats. J. Pharmacol. Exp. Therap. 268:474-481, 1994.

106. Zou, A.-P., J.D. Imig, M. Kaldunski, P.R. Ortiz de Montellano, Z. Sui, and R.J. Roman. Inhibition of renal vascular production of 20-hydroxyeicostetraenoic acid impairs autoregulation of renal blood flow. Am. J. Physiol. 266 (Renal Fluid and Electrolyte Physiol. 35): F275-F282, 1994.

107. Imig, J., A.-P. Zou, P.R. Ortiz de Montellano, Z. Sui, and R.J. Roman. Inhibitors of cytochrome P450 alter afferent arteriolar responses to elevations in pressure. Am. J. Physiol. 266 (Heart Circ. Physiol. 35):H1879-H1885, 1994.

108. Harder, D.R., D. Gehemendhin, J. Narayanan, C. Jefcoat, J. R. Falck, W.B. Campbell, and R.J. Roman. Formation and action of a P450 4A metabolite of arachidonic acid in cat cerebral microvessels. Am. J. Physiol. 266 (Heart and Circulatory Physiology 35):H2098-H2107, 1994.

109. Narayanan J., M. Imig, R.J. Roman, D.R. Harder. Pressurization of isolated renal arteries increases inositol triphosphate and diacylglycerol concentrations. Am. J. Physiol. 266 (Heart Circ. Physiol. 35):H1840-H1845, 1994.

110. Strick, D.M., M.J. Ficksen-Olsen, J.C. Lockhart, R.J. Roman, and J.C. Romero. Direct measurement of renal medullary blood flow in the dog. Am. J. Physiol. 267 (Reg. Int. Comp. Phyisol. 36):R253-R259, 1994.

111. Zou, A.P., J.D. Imig, P.R. Ortiz de Montellano, Z. Sui, J.R. Falck, and R.J Roman. Endogenous P450 metabolites of arachidonic acid modulate tubuloglomerular feedback. Am. J. Physiol. 267 (Renal Fluid and Electrolyte Physiol. 35):F934-F941, 1994.

112. Ma, Y.-H., M.L. Schwartzman and R.J. Roman. Renal metabolism of arachidonic acid in Dahl rats. Am. J. Physiol. 267 (Reg Int. Comp. Physiology 36):R579--R589, 1994.

113. St. Lezin, M. Pravenec, A. Wong, J.M. Wang, T. Merriouns, S. Newton, D.E. Stec, R.J. Roman, D. Lau, R.C. Morris, Jr., and T.W. Kurtz. Genetic contamination of Dahl SS/Jr rats: Impact on studies of salt sensitive hypertension. Hypertension 23:786-790, 1994.

114. Harder, D.R., J. Narayanan, D. Gebremedhin, and R.J. Roman. Transduction of Physical Forces by the vascular wall: Role of Phospholipase C and Cytochrome P450 metabolites of Arachidonic Acid. Trends in Cardiovascular Medicine 5: 7-14, 1995.

115. Gross, V., R.J. Roman, A.W. Cowley, Jr. Abnormal pressure-natriuresis in transgenic renin gene rats. J. Hypertension 12:1029-1034, 1994.

116. Zou, A-P, E.E. Muirhead, A.W. Cowley, Jr., D.L. Mattson, J.R. Falck, J. Jian, and R.J. Roman. Role of changes in renal hemodynamics and P450 metabolites of arachidonic acid in the reversal of 1K, 1C- hypertension. J. Hypertension 13:557-566, 1995.

117. Harder, D.R., W.B. Campbell, and R.J. Roman. Role of cytochrome P450 enzymes in the control of vascular tone. J. Vasc. Research 32:79-92, 1995.

118. Cowley, A.W., Jr., D. Mattson, S-H Lu, and R.J. Roman. Renal medulla in the development of hypertension. Hypertension 25:663-673, 1995.

119. Nakanishi, K, D.L. Mattson, V. Gross, R.J. Roman, and A.W. Cowley, Jr. Control of renal medullary blood flow by V1 and V2 receptors. Am. J. Physiol. 269 (Reg. Int. Comp. Physiol. 39):R193-R200, 1995.

120. Gebremedhin, D., M. Kaldunski, E.R. Jacobs, D.R. Harder, and R.J. Roman. Coexistence of two types of Ca^{++}-activated K^{+} channels in rat renal arterioles. Am. J. Physiol. 270 (Renal Fluid and Electrolyte Physiol. 39): F69-F81, 1996.

121. Imig, J.D., A.P. Zou, D.E. Stec, D.R. Harder, J.R. Falck and R.J. Roman. Formation and action of 20-HETE on in rat renal arterioles. Am. J. Physiol. 270 (Regulatory and Integrative Physiol. 39):R217-R227, 1996.

122. Zou, A-P, J.T. Fleming, J.R. Falck, E.R. Jacobs, D. Gebremedhin, D.R. Harder, and R.J. Roman. Stereospecific effects of epoxyeicosatrienoic acids on vascular tone and K^{+}-channel activity. Am. J. Physiol. 270 (Renal Fluid and Electrolyte Physiol. 39): F822-F832, 1996.

123. Zou, A-P, J.T. Fleming, J.R. Falck, E.R. Jacobs, D. Gebremedhin, D.R. Harder, and R.J. Roman. 20-hydroxyeicosatetraenoic acid is an endogenous inhibitor of the large conductance Ca^{++}-activated K^{+}-channel in renal arterioles. Am. J. Physiol. 270 (Reg. Int. and Comp. Physiol. 39):R228-R237, 1996.

124. St. Lezin, E.M., M. Pravenec, A.L. Wong, W. Liu, N. Wang, S.L. Lu, H. Jacobs, R. J. Roman, D.E. Stec, J.-M. Wang, I. Ried, T.W. Kurtz. Effects of renin gene transfer on blood pressure and renin gene expression in a congenic strain of Dahl salt-resistant rats. J. Clin. Invest. 97:522-527, 1996.

125. Lombard, J.H., A.S. Greene, A.G. Hudetz, R.J. Roman, and P.J. Tonellato. Microvascular bood flow and tissue $P0_2$ in rats with chronic reduced renal mass hypertension. Am. J. Physiol. Nov;279 (5): H2295-302, 2006.

126. Stec, D.E., M. R. Trolliet, J. E. Krieger, H.J. Jacob, and R.J. Roman. Renal cytochrome P4504A activity and salt-sensitivity in Spontaneously Hypertensive rats. Hypertension 27:1329-1336, 1996.

127. Zou, A.-P., H. Drummond, and R.J. Roman. Role of 20-HETE in elevating loop chloride transport in Dahl SS/Jr rats. Hypertension 27 (part 2):631-635, 1996.

128. Stec, D.E., A.Y. Deng, J.P. Rapp, and R.J. Roman. Cytochrome P4504A genotype cosegregates with hypertension in Dahl S rats. Hypertension 27 (part 2):564-568, 1996.

129. Harder, D.R., J. Narayanan, E. Birks, J. F. Liard, J. Imig, J.L. Lombard, A. Lange and R.J. Roman. Identification of a putative oxygen sensor. Circ. Res. 79:54-61, 1996.

130. Cowley, A.W., Jr. and R.J. Roman. Role of the kidney in hypertension. JAMA 275:1581-1589, 1996.

131. Alkayed, N.J., E.K. Birks, R.J. Roman, D.R. Harder. Inhibition of P450 epoxygenase decreases cerebral blood flow. Am. J. Physiol. (Heart Circ. Physiol. 40) 271:H1541-H1546, 1996.

132. Alkayed, N.J., J. Narayanan, D. Gebremendhin, M. Medhora, R.J. Roman, and D.R. Harder. Molecular characterization of an arachidonic acid epoxygenase in rat brain astrocytes. Stroke 27:971-979, 1996.

133. Okamoto H., A.G. Hudetz, R.J Roman, Z.J. Bosnjak and J.P. Kampine. Neuronal NOS-derived NO plays a permissive role in the cerebral blood flow response to hypercapnia. Am. J. Physiol. (Heart Circ Physiol 40) 271:H1541-H1546, 1996.

134. Wang M-H, D.E. Stec, V. Mastyugin, C.S. Yang, R.J. Roman and M. L. Schwartzman. Cloning, sequencing and cDNA-directed expression of the rat renal CYP4A2 as an arachidonic acid w-hydroxylase. Biochem Biophys Acta. 336:240-250, 1996.

135. Imig, J.D., R.J. Roman, L.G. Navar, and J.R. Falck. Actions of epoxygenase metabolites on the preglomerular vasculature. J.A.S.N. 7:2364-2370, 1996.

136. Cowley, A.W., Jr. and R.J. Roman. Renal Mechanisms in Hypertension. In: Handbook of Hypertension, vol 17, Pathophysiology of Hypertension, ed. by A. Zanchetti and G. Mancia, Elsiver Pub. Co., Amsterdam, 1997, pp 740-783.

137. Jiang J, D.E. Stec, H. Drummond, J.S. Simon, G. Koike, H. Jacob, R.J. Roman. Transfer of a salt-resistant renin allele raises arterial pressure in Dahl salt-sensitive rats. Hypertension 29:619-628, 1997.

138. Roman, R.J., M. Alonso-Galicia, T.W. Wilson. Renal P450 metabolites of arachidonic acid and the development of hypertension in Dahl S rats. Am. J. Hypertension 10:63S-67S, 1997.

139. Rieder, M.J., J.H. Lombard, R.J. Roman and A.S. Greene. Reversal of reduced renal mass hypertension and microvascular rarefaction. Hypertension 30:120-127, 1997.

140. Alonso-Galicia, M., H.A. Drummond, K.R. Catipally, J.R. Falck, R.J. Roman. Inhibition of 20-HETE production contributes to the vascular responses to nitric oxide. Hypertension 29 (2):320-326, 1997.

141. Stec, D.E., D.L. Mattson, R.J. Roman. Inhibition of renal outer medullary 20-HETE production produces hypertension in Lewis Rats. Hypertension 29(2):315-320, 1997.

142. Harder, D.R., A. Lange, D. Gebremendhin, R.J. Roman. Cytochrome P450 metabolites of arachidonic acid as intracellular signaling molecules in vascular tissue. J. Vasc. Res. 34:237-243, 1997.

143. Okamoto, H., W. Meng, J. Ma, C. Ayata, R.J. Roman, Z. Bosnjak, P. Huang, M.A. Moskowitz, A.G. Hudetz. Isoflurane-induced cerebral hyperremia in neuronal nitric oxide synthase gene deficient mice. Anesthesiology 86:875-884, 1997.

144. Jiang, J. and R.J. Roman. Lovastatin prevents the development of hypertension in Spontaneously Hypertensive rats. Hypertension 30:968-974, 1997.

145. Liu, Y.P., K.T. Fredricks, R.J. Roman, J.H. Lombard. Response of resistance arteries to reduced PO2 and vasodilators during hypertension and elevated salt intake. Am. J. Physiol. 273 (Heart Circ. Physiol. 42):H869-H877, 1997.

146. Kauker, M.L., E.D. Zawada, L.M. Kauker, R.J. Roman, and L. Rosivall. Evidence for distal tubular inhibition of calcium efflux by nisoldipine in the SHR rat. Experimental Nephrology 5:384-389, 1997.

147. Okamoto, H., O. Ito, R.J. Roman, A.G. Hudetz. Role of inducible isoforms of nitric oxide synthase and cyclooxygenase in endotoxin-induced cerebral hyperemia. Stroke 29:1209-1218, 1998.

148. Ito, O. M. Alonso-Galicia, K.A. Hopp, and R.J. Roman. Localization of cytochrome P4504A isoforms along the rat nephron. Am J. Physiol. 274 (Renal Physiol. 43):F395-F404, 1998.

149. Wilson, T.W., M. Alonso-Galicia, R.J. Roman. Effect of lipid lowering agents on arterial pressure and renal function in Dahl Salt-sensitive rats. Hypertension 31:225-231, 1998.

150. Harder D.R., N.Alkayed, A.R. Lange, and R.J. Roman. Functional hyperemia in the brain: role for astrocyte derived vasodilatory metabolites. Stroke 29:229-234, 1998.

151. Roman, R.J., M. Alonso-Galicia. Alterations in renal hemodynamics and glomerular and vascular injury in hypertension. Current Concepts in Hypertension. 2:4-5, 1998.

152. Alonso-Galicia, M, B. Frohlich, and R.J. Roman. Induction of P4504A activity normalizes pressure-natriuresis and prevents hypertension in Dahl S rats. Hypertension 31:232-236, 1998.

153. Evans, R.G., K. Day, R.J. Roman, K.H. Hopp, and W. P. Anderson. Efects of intrarenal infusion of 17-ODYA on renal antihypertensive mechansims in anesthetized rabbits. Am J Hypertenison 11:803-812, 1998.

154. Zhu D., R. Effros, D. Harder, R.J. Roman, E.R. Jacobs. Tissue sources of cytochrome P4504A and 20-HETE synthesis in rabbit lungs. Am J Respir Cell Mol Biol 19:121-128, 1998.

155. Jiang, J. and R.J. Roman. Lovastatin reduces renal vascular reactivity in spontaneously hypertensive rats. Am. J. Hypertension. 11:1222-1231, 1998.

156. Alonso-Galicia, M., C-W Sun, J.R. Falck, D.R. Harder and R.J. Roman. Inhibition of 20-HETE production mediates the cGmp-independent effects of nitric oxide in the renal circulation. Am J. Physiol. 275 (Renal Physiol. 44) F370-F378, 1998.

157. Sun, C-W, M Alonso-Galicia, M. R.Taheri, J. R. Falck, D. R. Harder and R J. Roman Nitric Oxide-20-HETE Interaction in the Regulation of K^+ Channel Activity and Vascular Tone in Renal Arterioles. Circ. Res. 83:1069-1079, 1998.

158. Harder, D.R., R.J. Roman, D. Gebremedhin, A.R. Lange. A common pathway for regulation of nutritive blood flow to the brain: Arterial muscle membrane potential and cytochrome P450 metabolites. Acta Physiol Scand 164:527-532, 1998.

159. VanDokkum R.P.E., A.P. Provoost, H.J. Jacob, and R.J. Roman. Impaired autoregulation of renal blood flow in the Fawn-Hooded rat. Am. J. Physiol. 276:R189-R196, 1999.

160. Roman R.J. Autoregulation of blood flow. In: Primer of Hypertension. ed by J. Izzo and H. R. Black. 1999, pp. 95-97.

161. VanDokkum, RPE, C.W. Sun, H.J. Jacobs, and R.J. Roman. Impaired renal myogenic responses in the Fawn-Hooded rat. Am. J. Physiol. 276:R855-R863, 1999.

162. Kelly, F.J. , S. Anderson, MM Thompson, TT Oyama, TM Kennefick, CL Corless, RJ Roman, L Kurtzber, BM Pratt and SR Ledbetter. Acute and chronic renal effects of recombinant human TGF-B2 in the rat. JASN 10:1264-1273, 1999.

163. Ito, O. and R.J. Roman. Regulation of 20-hydroxyeicosatetraenoic acid formation in the glomerulus of the rat. Am J Physiol. 276:R1749-R1758, 1999.

164. Sun C-W, JR Falck, DR Harder, and RJ Roman. Role of tyrosine kinase and PKC in the vasoconstrictor response to 20-HETE in renal arterioles. Hypertension 33:414-418, 1999.

165. Ito, O. and R.J. Roman. Role of 20-HETE in elevating chloride transport in the thick ascending limb of Dahl SS/Jr rats. Hypertension 33:419-423, 1999.

166. Messer, I., N. Bernard, R.J. Roman, J. Sassard, and D. Benzoni. Cytochrome P450 arachidonate metabolite inhibition improves renal function in Lyon hypertensive rats. Am. J. Hypertens. 12:398-404, 1999.

167. Lu, G, B. Mazet, C. Sun, X, Qian, C.P. Johnson, M.B. Adams, R.J. Roman and S.K. Sarna. Inflammatory modulation of calcium-activated potassium channels in canine colonic smooth muscle cells. Gastroenterology 116:884-892, 1999.

168. Lombard J.H., R.J. Roman, D.R. Harder, W.F. Jackson. Cytochrome P-450 ω-hydroxylase senses O_2 in hamster muscle, but not in cheek pouch epithelium. Am J Physiol 276:H503-H507, 1999.

169. Lombard J.H., D.M. Bizub, Y. Liu, K.T. Fredricks, R.J. Roman, and N.J. Rusch. Electrical and Mechanical Response of rat middle cerebral arteries to reduced PO_2 and prostacyclin. Am J. Physiol. 276:H509-H516, 1999.

170. Roman, R.J. Does 20-HETE mediate the cGMP independent actions of NO? Newsletter of the High Blood Pressure Research Newsletter 1:20-22, 1999.

171. Messer-Letienne I., N. Bernard, R.J. Roman, J. Sassard, and D. Benzoni. Hydroxy-eicosatetraenoic acids contribute to the renal alterations in the Lyon hypertensive rat. Eur. J. Pharmacol. 378:291-297, 1999.

172. Alonso-Galicia, M., J.R. Falck, and R.J. Roman.20-HETE agonists and antagonists in the renal circulation. Am. J. Physiol. 277:F790-F796, 1999.

173. Roman, R.J. and M. Alonso-Galicia. P450 eicosanoids: A novel signaling pathway regulating renal function. NIPS 14:238-241, 1999.

174. Alonso-Galicia M., A.G. Hudetz, H. Shen, D.R. Harder, and R.J. Roman. A fall in 20-HETE contributes to the vasodilator actions of NO in the cerebral microcirculation. Stroke 30:2727-2734, 1999.

175. Parekh,V, K.G. Maier, R.J. Roman, I.G. Joshua, J.C. Falcone, J.C. Passmore. Altered expression and activity of G-proteins, mitogen activated protein kinases and tyrosine kinases in the kidney cortex of aging rats. J. Invest. Med. 47:462-467, 1999.

176. Harder, DR, RJ Roman, RC Koehler, N Alkayed, D Gebremedhin, D Munzenmaier, M Medhora, and J Narayanan. Hyperpolarizing factors and membrane potential in cerebral arterioles: A role for astrocytes and cytochrome P450 genes. In: Hyperpolarizing Factors Edited by P.M..Vanhoute Plenumn Press, NY, 1999, pp 61-67.

177. Sun C-W, J.R. Falck, D.R. Harder, and R.J. Roman. Contribution of cGMP versus 20-HETE in mediating K^+ channel and vasodilator responses to NO in rat middle cerebral arteries. Am J Physiol Heart Circ Physiol. 279:H339-50, 2000.

178. Cowley, A.W., Jr., M. Stoll, A.S. Greene, M.L. Kaldunski, R.J. Roman, P.J. Tonellato, N.J Schork, P.Dumas 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. Physiol. Genomics 2:107-115, 2000.

179. 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. Edited by D. Wang , Humana Press Inc, Totowa, NJ 2000, pp 407-426.

180. Kotchen, T.A., A.W. Piering, A.W. Cowley, Jr., C.E. Grim, D. Gaudet, P. Hamet, M.L. Kaldunski, J.M. Kotchen, and R.J. Roman. Glomerular hyperfiltration in hypertensive African Americans. Hypertension 35:822-6, 2000.

181. Harder DR, Roman RJ, Gebremedhin D. Molecular mechanisms controlling nutritive blood flow: role of cytochrome P450 enzymes. Acta Physiol Scand. 68:543-9, 2000.

182. Zhu D, Bousamra M, Zeldin DC, Falck JR, Townsley M, Harder DR, Roman RJ, Jacobs ER. Epoxyeicosatrienoic acids constrict isolated pressurized rabbit pulmonary arteries. Am J Physiol Lung Cell Mol Physiol. 278:L335-L343, 2000.

183. Frisbee JC, Roman RJ, Falck JR, Linderman JR, Lombard JH. Impairment of flow-induced dilation of skeletal muscle arterioles with elevated oxygen in normotensive andhypertensive rats. Microvasc Res 60:37-48 2000.

184. Gebremedhin D, Lange AR, Lowry TF, Taheri MR, Birks EK, Hudetz AG, Narayanan J, Falck JR, Okamoto H, Roman RJ, Nithipatikom K, Campbell WB, Harder DR.Production of 20-HETE and its role in autoregulation of cerebral blood flow. Circ Res 87: 60-5, 2000.

185. Roman, R. J., K. G. Maier, C-W Sun, D.R. Harder, and M. Alonso-Galicia. Renal and cardiovascular actions of 20-HETE and EETs. Clinical Exp. Pharmacol. Physiol. 27:855-865, 2000.

186. Okamoto, H., R.J. Roman, J.P. Kampine, and A.G. Hudetz. Endotoxin augments cerebral hyperemic response to halothane by inducing nitric oxide synthase and cyclooxygenase. Anesth and Analg 91:896-903, 2000.

187. Maier, K.G., L. Henderson, J. Narayanan, M. Alonso-Galicia, J.R. Falck, and R.J. Roman. Fluroescent HPLC assay for 20-HETE and other P450 metabolites of arachidonic acid.Am J Physiol Heart Circ Physiol 279:H863-71, 2000.

188. Lombard, JH, JC Frisbee, AS Greene, AG Hudetz, RJ Roman, and PJ Tonellato. Microvascular flow and tissue PO2 in skeletal muscle of chronic reduced renal mass hypertensive rats. Am. J. Physiol Heart Circ Physiol 279:H2295-H2302, 2000.

189. Maier, K.G., and R.J. Roman. Renal actions of P450 metabolites of arachidonic acid. Current Opinion in Nephrol. 10:81-87, 2001.

190. Roman, RJ, Mattson DL, Cowley AW Jr. Measurement of regional blood flow in the kidney using laser-Doppler flowmetry. Methods Mol Med 51:407-426, 2001.

191. Ito O., K. Omata, S. Ito, and R.J. Roman. Effects of angiotensin converting enzyme inhibitors on the renal P450 metabolism of arachidonic acid. Am. J. Physiol. 280:R822-R830, 2001.

192. Zhu D, EK Birks, CA Dawson, M Patel, JR Falck, K Presberg, RJ Roman, ER Jacobs.Hypoxic pulmonary vasoconstriction is modified by P-450 metabolites.Am J Physiol Heart Circ Physiol. 279:H1526-H1533, 2000.

193. Frisbee, JC, RJ Roman, JR Falck and JH Lombard. Contribution of cytochrome P4504A enzymes to skeletal muscle resistance arterial oxygen and myogenic responses. Microvasc. Res 60:37-48, 2000.

194. Frisbee, J.C., R.J. Roman, J.R. Falck, and J.H. Lombard. 20-HETE modulates myogenic activation of skeletal muscle resistance arteries from hypertensive, but not normotensive Dahl S rats. Am J. Physiol.Heart Circ Physiol. 280:H1066-H1074, 2001.

195. Frisbee, J.C., R.J. Roman, J.R. Falck, and J.H. Lombard. Altered mechanisms underlying hypoxic dilation of skeletal muscle resistance arteries between hypertensive and normotensive Dahl rats. Microcirculation. 8:115-127, 2001.

196. Kunert, M.P., R.J. Roman, M. Alonso-Galicia, J.R. Falck, and J.H. Lombard. Cytochrome P-450 w-hydroxylase: A potential O2 sensor in rat arterioles and skeletal muscle cells. Am J. Physiol. 280:280:H1840-1845, 2001.

197. Kunert, M.P., R.J. Roman, J.R. Falck, and J.H. Lombard. Differential effect of cytochrome P-450 w-hydroxylase inhibition on O2 induced constriction of arterioles in SHR with early and established hypertension. Microcirculation. 8: 435-443, 2001.

198. Frisbee, J.C., R.J. Roman, J.R. Falck, and J.H. Lombard. 20-HETE contributes to myogenic activation of skeletal muscle resistance arteries in Brown Norway and Sprague Dawley rats. Microvascular Res. 8: 45-55, 2001.

199. Frisbee JC, Roman RJ, Krishna UM, Falck JR, Lombard JH. Relative contributions of cyclooxygenase and cytochrome P-450 omega-hydroxylase-dependent pathways to hypoxic dilation of skeletal muscle resistance arteries. J. Vasc. Res. 38:305-314, 2001.

200. Moreno, C, KG Maier, KM Hoagland, M Wu and RJ Roman. Abnormal pressure-natriuresis in hypertension: Role of cytochrome P450 metabolites of arachidonic acid. Am. J. Hypertension 14:90S-97S, 2001.

201. Amaral SL, RJ Roman and AS Greene. Renin gene transfer restores angiogensis and VEGF expression in Dahl S rats. Hypertension 37:386-390, 2001.

202. Cowley, AW, Jr., RJ Roman, ML Kaldunski, P Dumas, AS Greene, and HJ Jacob. Transfer of Brown Norway rat chromosome 13 into Dahl S genetic background confers protection from a high salt diet. Hypertension 37:456-461, 2001.

203. Hoagland KM, Maier KG, Moreno C, Yu M, and Roman RJ. Cytochrome P450 metabolites of arachidonic acid: novel regulators of renal function. Nephrol Dial Transplant 16:2283-2285, 2001.

204. Stoll M, Cowley, AW, Jr., Tonellato PJ, Greene AS, Kaldunski ML, Roman RJ, Dumas P, Shork NJ, Wang Z, and Jacob HJ. A genomic-systems biology map for cardiovascular function. Science 294: 1723-1726, 2001.

205. Lopez B, Moreno C, Salom MG, Roman RJ, and Fenoy FJ. Role of guanylyl cyclase and cytochrome P-450 on renal response to nitric oxide. Am J Physiol 281:F420-F427, 2001.

206. Roman, RJ. P450 metabolites of arachidonic acid in the control of cardiovascular function. Physiologic Reviews 82:131-185, 2002.

207. Moreno C, Mistry M, and Roman RJ. Renal effects of glucagon-like peptide in rats. Eur. J. Physiol. 11:163-167, 2002.

208. Kehl, F., H. Okamoto, K.G. Maier, D.R. Harder, N. Miyata, and R.J. Roman. Blockade of 20-HETE formation attenuates cerebral vasospasm following subarachnoid hemorrhage in the rat. Am. J Physiol. 282:H1556-H1565, 2002.

209. Yu, M, Sun, CW, Maier K, Harder DR, and Roman RJ. cGMP-dependent desensitization to calcium contributes to the vasodilator response to NO in rat middle cerebral arteries. Am J. Physiol Heart Circ Physiol. 282:H1724-H1731, 2002.

210. Makino A, Skeleton MM, Zou A-P, Roman RJ, and Cowley AW Jr. Increased renal medullary oxidative stress produces hypertension. Hypertension 39:667-672, 2002.

211. Alonso-Galicia M, Maier KG, Greene AS, Cowley AW Jr. and Roman, RJ. Role of 20-hydroxyeicosatrienoic acid in the renal and vasoconstrictor actions of angiotensin II. Am. J. Physiol. 283:R60-R68, 2002.

212. Dahly AJ, Hoagland KM, Flasch AK, Jha S, Ledbetter SR, and Roman RJ. Antihypertensive effect of anti-TGF-beta antibody therapy in Dahl S rats. Am. J. Physiol. 283:R757-R767, 2002.

213. Xu F, Straub WO, Pak W, Su P, Maier KG, Yu M, Roman RJ, Ortiz de Montellano PR, and Kroetz DL. Antihypertensive effect of mechanism-based inhibition of renal arachidonic acid w-hydroxylase activity. Am. J. Physiol. 283: R710-R720, 2002.

214. Frisbee JC, Maier KG, Falck JR, Roman RJ, and Lombard JH. Integration of hypoxic dilation signaling pathways for skeletal muscle resistance arteries. Am. J. Physiol. 283: R309-R319, 2002.

215. Szentivany M Jr, Zou AP, Mattson DL, Soares P, Moreno C, Roman RJ and Cowley AW Jr. Renal medullary NO deficit of Dahl S rats enhances the hypertensive actions of angiotensin II. Am. J. Physiol. 283: R266-R272, 2002.

216. Yu M, McAndrew RP, Al-Saghir R, Maier KG, Medhora M, Roman RJ, and Jacobs ER. Nitric oxide contributes to 20-HETE induced relaxation of pulmonary arteries. J. Appl. Physiol. 93:1391-1399, 2002.

217. Kehl F, Shen H, Moreno C, Farber NE, Roman RJ, Kampine JP and Hudetz AG. Isoflurane-induced hyperemia is partially mediated by nitric oxide and epoxyeicosatrienoic acids in mice in vivo. Anesthesiology 97:1528-1533, 2002.

218. Amaral SL, Maier KG, Roman RJ, and Greene AS. CYP4A metabolites of arachidonic acid and VEGF are mediators of skeletal muscle angiogenesis. Am J Physiol. Heart Circ Physiol. 284:H1528-H1535, 2003.

219. Hoagland KM, Maier KG and Roman RJ. Contribution of 20-HETE to the antihypertensive effects of tempol in Dahl salt-sensitive rats. Hypertension 41:697-702, 2003.

220. Cowley AW Jr and Roman RJ. Countercurrent exchange in the renal medulla. Am J Physiol Regul Integr Comp Physiol. 284:R1151, 2003.

221. Stec DE, Flasch A, Roman RJ, and White JA. Distribution of Cytochrome P450 4A and 4F isoforms along the nephron in mice. Am J Physiol Renal Physiol. 284: F95-F102, 2003.

222. Bylund J, Harder AG, Maier KM, Roman RJ and Harder DR. Leukotriene B4 omega-side chain hydroxylation by CYP4F5 and CYP4F6. Archiv Biochem Biophys 412:34-41, 2003

223. Campur-Sapunar L, Yu M, Maier KM, Harder DR and Roman RJ. Contribution of 5HT1b receptors and 20-HETE to the fall in cerebral blood flow following SAH. Stroke 34:1269-1275, 2003.

224. Roman RJ, Cowley AW Jr, Greene A, Kwitek AE, Tonellato PJ and Jacob HJ. Consomic rats for the identification of genes and pathways underlying cardiovascular disease. Cold Spring Harbor Symp Quant Biol 67: 309-315, 2002.

225. Yu M, Moreno-Quinn C, Hoagland K, Dahly A, Ditter K, Mistry M and Roman RJ. Antihypertensive effect of glucagon-like peptide in Dahl S rats. J Hypertension 21:1125-1135, 2003.

226. Yu M, Alonso-Galicia M, Sun CW, Roman RJ, Ono N, Hirano H, Ishimoto T, Reddy YK, Reddy KM, Gopal VR, Yu J, Takhi M, and Falck JR. 20-Hydroxyeicosatetraenoic Acid (20-HETE): structural determinants for renal vasoconstriction. Bioorganic Med Chem. 11:2803-2821, 2003.

227. Moreno C, Dumas P, Kaldunski ML, Tonellato PJ, Greene AS, Roman RJ, Cheng Q, Wang Z, Jacob HJ, and Cowley AW Jr. Genomic map of cardiovascular phenotypes of hypertension in female Dahl S rats. Physiol Genomics.11:243-257, 2003.

228. Hoagland KM, Flasch AK, and Roman RJ. Blockade of renal 20-HETE formation promotes salt-sensitive hypertension in rats. Hypertension 42:669-673, 2003.

229. Cowley AW Jr, Roman RJ. Countercurrent exchange in the renal medulla. Am J Physiol Regul Integr Comp Physiol. 284:R1151, 2003.

230. Mattson DL, Kunert MP, Kaldunski ML, Greene AS, Roman RJ, Jacob HJ and Cowley AW Jr. Influence of diet and genetics on hypertension and renal disease in Dahl Salt-sensitive rats. Physiol Genomics. 16:194-203, 2004.

231. Cowley AW Jr, Roman RJ, Jacob HJ. Application of chromosomal substitution techniques in gene-function discovery. J. Physiol. 554:46-55, 2004.

232. Yu M, Cambj-Sapunar, L, Kehl F, Maier KG, Takeuchi K, Miyata N, Ishimoto T, Reddy M, Falck JR, Gebremendhin D, Harder DR, and Roman RJ. Effects of a 20-HETE antagonist and agonists on cerebral vascular tone. Eur J of Pharmacol. 486297-306, 2004.

233. Hoagland KM, Flasch AK, Dahly-Vernon AJ, dos Santos EA, Knepper MA, Roman RJ. Elevated BSC-1 and ROMK expression in Dahl salt-sensitive rat kidneys. Hypertension. 43:860-5, 2004.

234. Sarkis A, and Roman RJ. Role of cytochrome P450 metabolites of arachidonic acid in hypertension. Current Drug Metabolism 5:245-256, 2004.

235. Nobrega MA, Fleming S, Roman RJ[1], Shiozawa M, Schlick N, Lazar J and Jacob HJ. Initial Characterization of a Rat Model of Diabetic Nephropathy. Diabetes 53:735-742, 2004.

236. Sarkis A, Lopez B, and Roman RJ. Role of 20-HETE and EETS in hypertension. Current Opinion in Nephrology and Hypertension 13:205-214, 2004.

237. Roman RJ. Gene Therapy and Heme Oxygenase Coming of Age. Hypertension 43: 1173-1174, 2004.

238. Lombard JH, Frisbee JC, Roman RJ, Falck JR. Evaluation of cytochrome P450-4A omega-hydroxylase and 20-hydroxyeicosatetraenoic acid as an O2 sensing mechanism in the microcirculation. Methods Enzymol. 381:140-65, 2004

239. Santos EA, Annette Dahly A, Hoagland KM, and Roman RJ. Influence of CYP metabolites of arachidonic acid on pressure natriuresis. Am J Physiol. 287:R58-R68, 2004.

240. R.P. Amin RP[1], A.E. Vickers AE, Sistare F, Thompson K, Roman RJ, Lawton M, Kramer J, Hamadeh HK, Collins J, Grissom S, Bennett L, Tucker CJ, Wilde S, Oreffo V, Davis J, Curtiss S, Naciff JM, Cunningham M, Tennant R, Stevens J, Car B, Bertram TA, Afshari CA. Expression Profiles Associated With Nephrotoxicity. Enviromental Health Perspectives 112:465-479, 2004.

241. Kramer JA, Petit S, Amin RP, Bertram TA, Car B, Cunningham M, Curtiss SW, Davis J, Lawton M, Naciff J, Oreffo V, Roman RJ, Sistare FD, Stevens J, Thompson K, Vickers AE,Wild S, and Afshari CA. Report on the application of transcription profiling using selected nephrotoxicants for toxicology assessment**.** Enviromental Health Perspectives 112:460-464, 2004.

242. Rajapakse NW, Roman RJ, Falck JR, Oliver JJ and Roger G. Evans. Modulation of V_1-receptor-mediated vasoconstriction by epoxyeicosatrienoic acids. Am J Physiol.287:R181-R187, 2004

243. Cowley AW Jr, Liang M, Roman RJ, Greene AS, Jacob HJ. Consomic rat model systems for physiological genomics. Acta Physiol Scand. 181: 585-92, 2004.

244. Stekiel TA, J Contney S, Bosnjak ZJ, Kampine JP, Roman RJ, Stekiel WJ. Reversal of minimum alveolar concentrations of volatile anesthetics by chromosomal substitution. Anesthesiology. 101: 796-798, 2004.

245. Wang J, Maier KG, Roman RJ, De La Cruz L, Zhu J, Henderson L, Lombard JH. Expression of Cytochrome P450-4A Isoforms in the Rat Cremaster Muscle Microcirculation. Microcirculation. 11:89-96, 2004.

246. Wang J, Roman RJ, Falck JR, de la Cruz L, Lombard JH. Effect of High Salt Diet on Cytochrome P450-4A hydroxylase Expression and Active Tone in Mesenteric Resistance Arteries. Am J Physiol 288:H1557-H1565, 2005.

247. Zhu J, Yu M, Friesema J, Huang T, Roman RJ, Lombard JH. Salt-Induced Angiotensin II Suppression Impairs the Response of Cerebral Artery Smooth Muscle Cells to Prostacyclin. Am J Physiol 288:H908-H913, 2005.

248. Dahly AJ, Sharma M, McCarthy ET, Savin VJ, Ledbetter S and Roman RJ. TGF-β, 20-HETE interaction and glomerular injury in Dahl S rats. Hypertension 45:643-648, 2005.

249. Seki T, Ishimoto T, Sakurai T, Yasuda Y, Taniguchi K, Doi M, Sato M, Roman RJ, Miyata N. Increased excretion of urinary 20-HETE in rats with cyclosporine-induced nephrotoxicity. J Pharmacol Sci. 97:132-137, 2005.

250. Vera T, Taylor M[1], Bohman Q, Flash A,.Roman RJ[2], Stec DE. Fenofibrate prevents the development of Angiotensin II-dependent hypertension in mice. Hypertension 45:730-735, 2005.

251. Grim CE, Cowley AW Jr, Hamet P, Gaudet D, Kaldunski ML, Kotchen JM Krishnaswami S, Pausova Z, Roman RJ, Tremblay J, Kotchen TA. Hyperaldosteronism and hypertension. Ethnic differences. Hypertension 45:766-772, 2005.

252. Mattson DL, Kunert MP, Roman RJ, Jacob HJ and Cowley AW, Jr. Substitution of chromosome 1 amelorates L-Name hypertension and renal disease in Fawn Hooded Hypertensive Rat. Am J Physiol. 288:F1015-F1022, 2005.

253. Rangel-Filho A, Sharma M, Datta Y, Moreno C, Roman RJ, Iwamoto, Y, Provoost A, Lazar J, Jacob HJ. The R*f*-2 gene modulates proteinuria and albuminuria independently of changes in glomerular permeability in the Fawn Hooded Hypertensive rat. JASN 16:852-856, 2005.

254. Chen P, Guo M, Wygle D, Edwards P, Falck JR, Roman RJ and Scicli AG. Inhibitors of Cytochrome P450 4A suppress angiogenic responses. Am J Pathol 166:615-624, 2005.

255. Miyata N, Seki T, Tanaka Y, Omura T, Taniguchi K, Doi M, Bandou K, Kametani K, Sato M, Okuyama S, Cambj-Sapunar L, Harder DR and Roman RJ. Beneficial Effects of a new 20-HETE Synthesis Inhibitor, TS-011 on hemorrhagic and Ischemic Stroke. J Pharm and Exp Therap. 314:77-85, 2005.

256. Takeuchi K, Renic M, Bohman QC, Harder DR, Miyata N and Roman RJ. Reversal of delayed vasospasm by an inhibitor of the synthesis of 20-HETE. Am J Physiol 289:H2203-H2210, 2005.

257. Sarkis A, Ito O, Mori T, Kohzuki M, Ito S, Verbalis J, Cowley AW Jr and Roman RJ. Cytochrome P45 dependent metabolism of arachidonic acid in the kidney of rats with diabetes insipidus. Am J Physiol 289: F1333-40, 2005.

258. Miyata N, Roman RJ. Role of 20-hydroxyeicosatetraenoic acid (20-HETE) in vascular system. J Smooth Muscle Res. 41:175-93, 2005.

259. Zagorac D, Yamaura K, Zhang C, Roman RJ, Harder DR. The effect of superoxide anion on autoregulation of cerebral blood flow. Stroke. 36:2589-94, 2005.

260. Guo M, Roman RJ, Falck JR, Edwards PA, Scicli AG. Human U251 glioma cell proliferation is suppressed by HET0016 [N-hydroxy-N'-(4-butyl-2-methylphenyl) formamidine], a selective inhibitor of CYP4A. J Pharmacol Exp Ther 31:526-33, 2005.

261. Guo M, Roman RJ, Fenstermacher JD Brown S Falck JR Arbab AS, Edwards PA, Scicli AG. 9L Gliosarcoma Cell Proliferation and Tumor Growth are Suppressed by HET0016, a Selective Inhibitor of CYP4A. J Pharmacol Exp Ther. 317:97-108, 2006.

262. Takeuchi K, Miyata N, Renic M, Harder DR, and Roman RJ. Hemogloblin, NO and 20-HETE interactions in medicating cerebral vasoconstriction following SAH. Am J Physiol 290:R84-R89, 2006.

263. Qin X, Kwansa, H, Bucci E, Roman RJ, Koehler RC. Role of 20-HETE in the pial arteriolar constrictor reponse to decrease hematocrit after exchange transfusion of cell-free polymeric hemoglobin. J Appl Physiol 100:336-42, 2006.

264. Roman RJ, Renic M, Dunn KD, Takeuchi K and Hacein-Bey L**.** Evidence that 20-HETE Contributes to the Development of Acute and Delayed Cerebral Vasospasm. Neuroradiol Res 28:38-749, 2006.

265. Lopez B, Ryan RP, Moreno C, Sarkis A, Lazar J, Proovost AP, Jacob HJ, and Roman RJ. Identification of a QTL on chromosome 1 for impaired autoregulation of RBF in Fawn Hooded-Hypertensive rats. Am J Physiol 290: F1213-F1218, 2006.

266. Zhu J, Drenjancevic-Peric I, McEwen S, Friesema J, Schulta D, Yu M, RomanRJ, Lombard JH. Role of superoxide and angiotensin II suppression in salt-induced changes in endothelial Ca2+ signaling and NO production in rat aorta. Am J Physiol 291:H929-38, 2006.

267. Kwitek AE, Jacob HJ, Baker JE, Dwindell MR, Forster HV, Greene AS, Kunert MP, Lombard JH, Mattson DL, Pritchard KA, Roman RJ, Tonellato PH, Cowley AW Jr. The BN Phenome: Detailed characterization of the cardiovascular, renal and pulmonary systems of the Sequenced Rat. Physiologic Genomics 102:799-805, 2006.

268. Roman, RJ, Hoagland KM, Alonso-Galicia M, Maier KM, Flasch AK, Aebly MR, Jacob HJ, Garrett MR, Rapp JP, and Roman RJ. Characterization of blood pressure and renal function in chromosome 5 congenic strains of Dahl S rats. Am J Physiol 290: F1463-71, 2006.Abe M, O'Connor P, Kaldunski M, Liang M, Roman RJ and Cowley AW Jr. Effect of sodium delivery on superoxide and nitric oxide in the medullary thick ascending limb. Am J Physiol 291:F350-7, 2006

270. Omura T, Tanaka Y, Miyata N, Koizumi C, Sakurai T, Fukasawa M, Hachiuma K, Minagawa T, Susumu T, Yosida S, Nakaike S, Shigeru O, Harder DR and Roman RJ. Effect of a new inhibitor of the synthesis of 20-HETE on cerebral ischemia reperfusion injury. Stroke 37:1307-13, 2006.

271. Hacein-Bey L, Harder DR, Meier HT, Varelas PN, Miyata N, Lauer KK, Cusick JF, Roman RJ. Reversal of delayed vasospasm by TS-011 in the dual hemorrhage dog model of subarachnoid hemorrhage. AJNR Am J Neuroradiol. 27:1350-4, 2006.

272. Stekiel TA, Contney SJ, Bosnjak ZJ, Kampine JP, Roman RJ, Stekiel WJ. Chromosomal substitution-dependent differences in cardiovascular responses tosodium pentobarbital. Anesth Analg. 102(3):799-805, 2006.

273. Taylor NE, Maier KG, Roman RJ and Cowley AW Jr. NO synthase uncoupling in the kidney of Dahl S rats-role of dihydrobiopterin. Hypertension 48: 1066-71, 2006.

274. Harder DR, Roman RJ. Endothelial dysfunction and hypertension in rats transduced with CYP4A2 adenovirus. Circ Res. 98:866-7, 2006.

275. Guo AM, Arbab AS, Falck JR, Chen P, Edwards PA, Roman RJ and Scicli AG. Activation of VEGF Through ROS Mediates 20-HETE-Induced Endothelial Cell Proliferation. J Pharm Exp Therap 321:18-27, 2007.

276. Williams JM, Sarkis A, Lopez B, Ryan RP, Flasch AK and Roman RJ. Elevations in renal interstitial hydrostatic pressure and 20-HETE contribute to pressure natriuresis. Hypertension 48: 1-8, 2007.

277. Yu M, Lopez B, Santos EA, Falck JR and Roman RJ. Effects of 20-HETE on Na-K-ATPase activity in the thick ascending loop of Henle. Am J Physiol 292:R2400-R2405, 2007.

278. Moreno C, Kaldunski ML, Wang T, Roman RJ, Greene AS, Lazar J, Jacob HJ and Cowley AW Jr. Existence of multiple blood pressure loci on rat chromosome 13 of the Dahl S hypertensive rat. Physiologic Genomics 000:000-000, 2007. june 12 epub.

279. Michalkiewicz M, Michalkiewicz T, Guertz AM, Roman RJ, Slocum GR, Singer O, Weihrauch D, Greene AS, Kaldunski M, Verma IM and Cowley AW Jr. Efficient rat production by a lentiviral vector. Am J Physiol 293:H881-H894, 2007.

280. Stec DE, Roman RJ, Falsch A and Rieder MJ. Functional polymorphisms in human CYP4F2 decrease 20-HETE production. Physiologic Genomics.30:74-81, 2007.

281. Williams JM, Sharma M, Anjaiahh S, Falck JR, Roman RJ. Role of endogenous CYP450 metabolites of arachidonic acid in maintaining the glomerular permeability barrier. Am J Physiol 293:501-505 2007.

282. Roman RJ and Lombard JH. Does 20-hydroxyeicosatetraenoic acid contribute to sex differences in cardiovascular risk by increasing oxidative stress? Hypertension 50:37-38, 2007.

283. Mattson DL, Dwinell MR, Green 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.

284. Moreno C, Kaldunski ML, Wang T, Roman RJ, Greene AS, Lazar J, Jacob HR, Cowley AW Jr. Multuiple blood pressure loci on rat chromosome 13 attenuate development of hypertension in the Dahl S hypertensive rat. Physiologic Genomics 31:228-235, 2007.

285. Nye SH, Wittenburg AL, Evans DL, O Connor JA, Roman RJ and Jacob HJ. Rat survival to anthrax lethal toxin is likely controlled by a single gene. Pharmacogenomics J. 8(1): 16-22, 2008 (Feb.). PMID: 17440430

286. Nilakantan V, Maenpaa C, Jia G, Roman RJ, Park F. 20-HETE mediated cytotoxicity and apoptosis in ischemic kidney epithelial cells. Am J Physiol Renal Physiol. 294(3): F562-570, 2008. PMCID: PMC2633439

287. Tunctan B, Korkmaz B, Buharalioglu CK, Firat SS, Anjaiah S, Falck J, Roman RJ, Malik KU. A 20-hydroxyeicosatetraenoic acid agonist, N-[20-HYDROXYEICOSA-5(Z),14(Z)-DIENOYL]GLYCINE, opposes the fall in blood pressure and vascular reactivity in endotoxin-treated rats. Shock.30(3): 329-35, 2008. PMCID: PMC2615390

288. Guo AM, Sheng J, Scicli GM, Arbab AS, Lehman NL, Edwards PA, Falck JR, Roman RJ, Scicli AG. Expression of CYP4A1 in U251 human glioma cell induces hyperproliferative phenotype in vitro and rapidly growing tumors in vivo. J Pharmacol Exp Ther. 327(1): 10-19, 2008. PMCID: PMC2636507

289. Park F, Sweeney WE, Jia G, Roman RJ and Avner ED. Contribution of 20-HETE tp the abnormal proliferation of renal epithelial cells in the BPK mouse. JASN 19(10): 1929-1039, 2008. PMCID: PMC2551562

290. Liu X, Li C, Falck JR, Roman RJ, Harder DR, Koehler RC. Interaction of nitric oxide, 20-HETE, and EETs during functional hyperemia in whisker barrel cortex. Am J Physiol Heart Circ Physiol. 295(2): H619-31, 2008. PMCID: PMC2519225

291. Dunn KM, Renic M, Flasch AK, Harder DR, Falck J, Roman RJ. Elevated production of 20-HETE in the cerebral vasculature enhances severity of ischemic stroke in spontaneously hypertensive rats. Am J Physiol. Heart Circ Phys. 295(6): 2455-2465, 2008 PMCID: PMC2614536

292. Renic M , Klaus JA, Omura T, Kawashima N, Onishi M, Miyata N, Koehler RC, Harder DR, and Roman RJ. Effect of 20-HETE inhibition on infarct volume and cerebral blood flow after transient middle cerebral artery occlusion. J Cerebral Blood Flow and Metabolism. 29:629-639, 2009. PMCID: PMC2821901

293. Mattson DL, Dwinell MR, Greene AS, Kwitek AE, Roman RJ, Jacob H, and Cowley, AW Jr. Chromosome substitution reveals the genetic basis of Dahl salt-sensitive hypertension and renal disease. Am J Physiol 295(3): F837-F842, 2008. PMCID: PMC2536867

294. Williams JM, Sarkis A, Hoagland KM, Fredrich K, Ryan RP, Moreno C, Lopez B, Lazar J, Fenoy FJ, Sharma M, Garrett MJ, Jacob HJ, Roman RJ. Transfer of the CYP4A region of chromosome 5 from Lewis to Dahl S rats attenuates renal injury. Am J Physiology Renal Physiol 295(6): 1764-1777, 2008. PMCID: PMC2604826

Last 5 years UMC Publications 295-360 (65)

295. Regner KR, Zuk A, Shames BD, Van Why SK, Ryan RP, Roman RJ. Protective effect of 20-HETE analogues in experimental renal ischemia-reperfusion injury. Kidney Int 75: (5)11-517, 2009. PMCID: PMC2643317

296. Wang J, Schmidt JR, Roman RJ, Anjaiah S, Falck JR, Lombard JH. Modulation of vascular O2 responses by cytochrome P4504A w-hydroxylase metabolites in Dahl salt-sensitive rats. Microcirculation J 16(4): 345-354, 2009. PMCID: PMC2672112

297. Koehler RC, Roman RJ, Harder DR. Astrocytes and the regulation of cerebral blood flow. Trends in Neuroscience 32(3):160-169, 2009. PMID# 19162338

298. Park F, Sweeney WE, Jia G, Akbulut T, Mueller B, Falck JR, Birudaraju S, Roman RJ, Avner EA. Chronic blockade of 20-HETE synthesis reduces polycystic kidney disease in an orthologous rat model of ARPKD. Am J Physiol. 296: F575-582, 2009. PMCID: PMC2660198

299. Yousif MHM, Benter IF, Dunn KM, Dahly-Vernon AJ, Akhatar S, Roman RJ. Role of 20-hydroxyeicosatetraenoic acid in altering vascular reactivity in diabetes. J Autonomic and Autacoid Pharmacology 29:1-12, 2009. PMCID: PMC2831294

300. Yousif MH, Benter IF, Roman RJ. Cytochrome P450 metabolites of arachidonic acid play a role in cardiac dysfunction in diabetic rats following ischaemic reperfusion injury. J Auton and Autacoid Pharmacology 29:33-41, 2009. PMCID: PMC2831291

301. Cao S, Wang LC, Kwansa H, Roman RJ, Harder DR, Koehler RC. Endothelin rather than 20-HETE contributes to loss of pial arteriolar dilation during focal cerebral ischemia with and without polymeric hemoglobin transfusion. Am J Physiol Regul Integr Comp Physiol. 296: R1412-R1418, 2009. PMCID: PMC2689832

302. Stadnicka A, Contney SJ, Moreno C, Weihrauch D, Bosnjak ZJ, Roman RJ and Stekiel TA. Mechanism of differential cardiovascular response to propofol in Dahl salt-sensitive, Brown Norway and chromosome 13 substituted consomic rat strains: role of large conductance Ca2+ and valtage activated potassium channels. J Pharm Exp Therap 330:727-735, 2009. PMCID: PMC272794

303. Akbulut T, Regner KR, Roman RJ, Avner ED, Falck JR, Park F. 20-HETE activates the Raf/MEK/ERK pathway in renal epithelial cells through EGFR- and c-Src-dependent mechanism. Am J Physiol Renal Phys 297: F662-F670, 2009. PMCID: PMC2739708

304. Wiessner JH, Garrett MR, Roman RJ and Mandel NS. Dissecting the genetic basis of kidney tubule response to hyperoxaluria using chromosome substitution strains. Am J Physiol Renal Physiol 297: F301-306, 2009. PMCID: PMC2724241

305. Wang J, Schmidt JR, Roman RJ, Anjaiah S, Falck JR, Lombard JH. Modulation of vascular O2 responses by cytochrome 450-4A omega-hydroxylase metabolites in Dahl salt-sensitive rats. Microcirculation. 16(4): 345-354, 2009. PMCID: PMC2672112

306. Alexanian A, Rufanova VA, Miller B, Flasch A, Roman RJ, Sorokin A. Down-regulation of 20-HETE synthesis and signaling inhibits renal adenocarcinoma cell proliferation and tumor growth. Anticancer Res. 29:3819-24, 2009. PubMedCentral ID: PMC2807614

307. 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 Jr AW. Dynamic convergence and divergence of renal genomic and biological pathways in protection from Dahl salt-sensitive hypertension. Physiol Genomics. 41: 63-70, 2010. PubMedCentral ID: PMC2841498

308. Yang Y, Dahly-Vernon AJ, Blomme EA, Lai-Zhang J, Kempf DJ, Marsh KC, Harrington YA, Nye SH, Evans DL, Roman RJ, Jacob HJ, Waring JF. Liver transcriptomic changes associated with ritonavir-induced hyperlipidemia in sensitive and resistant strains of rats. Vet J. 185: 75-82, 2010. PubMed PMID:20547082

309. Regner KR, Nilakantan V, Ryan RP, Mortensen J, White SM, Shames BD, Roman RJ. Protective effect of lifor solution in experiment renal ischemia-reperfusion injury. J Surg Res. 164:291-297, 2010. PubMed PMID: 20888590; PubMed Central PMCID: PMC 2991539.

310. Raffai G, Wang J, Roman RJ, Anjaiah S, Weinberg B, Falck JR, Lombard JH. Modulation by cytochrome P450-4A ω-hydroxylase enzymes of adrenergic vasoconstriction and response to reduced PO_2 in mesenteric resistance arteries of Dahl salt-sensitive rats. Microcirculation. 17:525-35, 2010 PubMed PMID: 21040118.

311. Williams JM, Murphy S, Burke M, Roman RJ. 20-hydroxyeicosatetraenoic acid: a new target for the treatment of hypertension. J Cardiovasc. Pharmacol. 56:336-344, 2010. PubMEd PMID: 20930591; PubMed Central PMCID; PMC 2953733.

312. Williams JM, Burke M, Lazar J, Jacob HJ, Roman RJ. Temporal characterization of the development of renal injury in FHH rats and FHH.1BN congenic strains. Am. J. Physiol 300:F330-F338, 2011. PubMed Central PMID: 21048028

313. Moreno, 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 S-13 congenic strains. Am J Physiol 300: H1530-H1535, 2011. PMID 21257920

314. Roman RJ, Akbulut T, Park F, Regner KR. 20-HETE in acute renal injury. Kidney Int 79:10-13, 2010. PMID 21157458

315. Williams JM, Zhang J, North P, Lacy S, Yakes M, Dahly-Vernon AD, Roman RJ. Effects of a selective metalloprotease inhibitor on hypertension and diabetic nephropathy. Am J Physiology Renal Physiol 300:F983-F998, 2011. PMID 21228113

316. Reckelhoff JF and Roman RJ. Androgen and hypertension: Role males and females? Hypertension 57:681-682, 2011. PMID 21321304.

317. Liu X, Li C, Gebremedhin D, Hwang SH, Hammock BD, Falck Jr, Roman RJ, Harder DR, Koehler RC. Epoxyeicosatrienoic acid-dependent cerebral vasodilation evoked by metabotropic glutamate receptor activation in vivo. Am J Physiol 301:H373-383, 2011. PMID 21602473

318. Guo AM, Branilava J, Sheng J, Falck JR, Roman RJ, Edwards PA, Arbab AS and Scicli G. The CYP4A-20-HETE system in the regulation of endothelial precursor cell derived from human umbilical cord blood. J Pharm Exp Therap 338:421-429, 2011.PMID 21527533

319. Pavlov TS, Ilatovskay DV, Roman RJ and Staruschenko A. Cytochrome P-450 metabolites of arachidonic acid inhibit the epithelial Na^+ channel (ENaC). Am J Physiol Renal Physiol 301:F672-F681, 2011. PMID 21697242

320. Yanes LL, Lima R, Moulana M, Romero DG, Yuan K, Ryan MJ, Baker R, Zhang H, Fan F, Davis DD, Roman RJ, Reckelhoff JF. Postmenopausal hypertension: role of 20-HETE. Am J Physiol. 300:R1543-R1548, 2011. PMID 21474427

321. Stekiel, TA, Contney SJ, Roman RJ, Weber CA, Stadnicka A, Bosnjak ZJ, Greene AS, Moreno C. Pharmacogenic strain differences in cardiovascular sensitivity to propofol. Anesthesiology 115:1-9, 2011 PMID 22020141

322. Regner KR, Roman RJ. Role of medullary blood flow in the pathogenesis of renal ischemia-reperfusion injury. Current Opin Nephrol and Hypertension. 21:33-38, 2012 PMID 22080855 NIHMSID 359893 PMC in progress

323. Park SW, Shen X, Tien L-T, Roman RJ, Ma T. Methamphetamine-induced changes in the striatal dopamine pathway in mu-opioid receptor knockout mice. J Biomed Sci 18:83-87, 2011. PMID 22329540 PMID: PMC3228795

324. Park SW, Shen X, Tien L-T, Roman RJ, Ma T. Differential action of methamphetamine on tyrosine hydroxylase and dopamine transport in the nigrostriatal pathway of mu-opioid receptor knockout mice. Int J. Neuroscience 122:305-313, 2012. PMID

325. Yang Z-J, Carter EL, Kibler KK, Kwansa H, Crafa DA, Martin LJ, Roman, RJ, Harder,DR Koehler RC. Neuroprotective effect of a 20-HETE synthesis inhibitor in selectively vulnerable putamen after neonatal hypoxia-ischemia. J Neurochem 121:168-179, 2012. PMID 22251169 PMCID: PMC3303996

326. Renic M, Kumar S, Gebremedhin D, Florence MA, Gerges NZ, Falck JR, Harder DR, Roman RJ. Protective effect of 20-HETE in a model of oxygen-glucose deprivation in hippocampal slice cultures. Am J Physiol 302:H1285-H1293, 2012. PMID22245774 PMCID: PMC3311475

327. Murphy SR, Dahly-Vernon AJ, Dunn KM, Chen CC, Ledbetter SR, Williams JM, Roman, RJ. Renoprotective effects of anti-TGF-B antibody and antihypertensive therapies in Dahl S rats. Am J Physiology 303:R57-R69, 2012. PMID: 22538513 PMCID: PMC3404639

328. Williams JM, Fan F, Murphy S, Lazar J, Jacob HJ, and Roman RJ. Role of 20-HETE in the antihypertensive effect of transfer of chromosome 5 from Brown Norway to Dahl salt sensitive rats. Am J Physiology 302:R1209-1218, 2012. PMID: 22442195 PMCID: PMC3362151

329. Fernandez MM, Gonzalez D, Williams JM, Roman RJ, Nowicki S. Role of 20-hydroxyeicosatraenoic acid in the natriuretic effect of dopamine. Eur J Pharmacol. 686:97-103, 2012. PMID: 22766068 PMCID: PMC 3367097

330. O'Meara CC, Lutz MM, Sarkis AB, Xu H, Kothinti RK, Hoffman M, Moreno C, Tabatabai NM, Lazar J, **Roman RJ**, Jacob HJ. A 4.1-mb congenic region of RF-4 contributes to glomerular permeability. J Am Soc Nephrol. 23:825-33, 2012. PMID: 22343117 PMCID: PMC3338295.

331. Williams JM, Johnson AC, Stelloh C, Dreisbach AW, Franceschini N, Regner KR, Townsend RR, **Roman RJ**, Garrett MR. Genetic variants in arhgef11 are associated with kidney injury in the Dahl salt-sensitive rat. Hypertension 60:1157-1168, 2012 PMID 22987919 PMCID: PMC 3505884.

332. Pabbidi MR, Juncos JP, Juncos LA, Renic M, Tullos H, Lazar J, Jacob HJ, Harder DR, **Roman RJ**. Identification of a region of rat chromosome 1 that impairs the myogenic response and autoregulation of cerebral blood flow in Fawn Hooded Hypertensive rats. Am J Physiol. 304:H311-H317, 2012. PMID23144316, PMCID: PMC 3543673.

333. Kothinti RK, Blodgett AB, North PE, **Roman RJ**, Tabatabai NM. A novel SGLT is expressed in the human kidney. Eur J Pharmacol. 690:77-83, 2012 PubMed PMID: 22766068 PMCID:PMC3604697

334. Alexanian A, Miller B, **Roman RJ**, Sorokin A. 20-HETE-producing enzymes are up-regulated in human cancers. Cancer Genomics Proteomics. 9:163-9, 2012. PubMed PMID: 2279850 PMCID:PMC3601443

335. Chen CC, Geurts AM, Jacob HJ, Fan F, **Roman RJ**. Heterozygous knockout of transforming growth factor-B1 protects Dahl S rats against high salt-induced renal injury. Physiological Genomics. 45:110-118, 2013 PMID 23249995, PMCID: PMC3568879.

336. Fu Y, Lu Y, Zhu Z, Mahajan GJ, Lu D, **Roman RJ**, Liu R. Testosterone enhances tubuloglomerular feedback by increasing superoxide production in the macula densa. Am J Physiology 304:R726-R733, 2013. 23467324. PMCID: PMC 3652076

337. Ge Y, Murphy SR, Lu Y, Falck J, Liu R, **Roman RJ**. Endogenously produce 20-HETE modulates myogenic and TGF response in microperfused afferent arterioles. Prostaglandins Other Lipid Mediat. 2013 Apr-May;102-103:42, 2013. PMID:23500064: PMCID:PMC3959178

338. Kojima N, Williams JM, Takahashi T, Miyata N, Roman RJ. Effects of a new SGLT2 Inhibitor, Luseogliflozin on diabetic nephropathy in T2DN rats. J Pharmacol Exp Therap. 345:464-472, 2013 PMID: 2349294, PMCID:PMC 3657194

339. Orozco LD, Liu H, Chen BB, Perkins E, Johnson DA, Betty B, Fan F, Baker RC, **Roman RJ**. Inhibitors of 20-HETE synthesis attenuates neointimal formation and vascular remodeling following balloon injury of the carotid artery. J Pharmacology Exp Therap. 346:67-74, 2013. PMID 23658377, PMCID:PMC 3684845

340. Slaughter TN, Paige A, Spires D, Kojima N, Kyle PB, Garrett MR, **Roman RJ**, Williams JM. Characterization of the development of renal injury in type-1 diabetic Dahl salt-sensitive rats. Am J Physiol Reg Int Comp Physiol 305: R727-734, 2013. PMID:23926133 PMCID:PMC3798803

341. Kojima, N, Slaughter TN, Paige A, Kato S, **Roman RJ**, Williams JM. Comparison of the development of diabetic induced renal disease in strains of Goto-Kakizaki rats. J Diabetes Metabolism May 30;Suppl 9(5). pii: S9-0059, 2013 PMID:24319624; PMCID:PMC3853344

342. Burke M, Pabbidi M, Fan F, Ge Y, Liu R, Williams JM, Sarkis A, Lazar J, Jacob HJ, **Roman, RJ**. Genetic basis of the impaired renal myogenic response in FHH rats. Am J Physiology 304:F565-F567, 2013. PMID 23220727, PMCID:PMC 3602705.

343. Pabbidi MR, Farley JM, Gebremendhin D, Harder DR, **Roman RJ**. Enhance large conductance K (BK) channel activity contributes to the impaired myogenic response in the cerebral vasculature of Fawn Hooded Hypertensive (FHH) rats. Am J Physiol 306:H989-H1000, 2014 PMID:24464756, PMCID:PMC 3962634.

344. Fan F, Sun C-W, Maier KG, Williams J, Didion S, Falck JR, Zhuo J, **Roman RJ.** 20-hydroxyeicosa-tetraenoic acid contributes to the inhibition of K channel activity and vasoconstrictor response to angiotensin II in renal arterioles. PLOS One Dec 4;8(12):e8248, 2013 PMID:24324797, PMCID:PMC3853207

345. Maranon RO, Lima R, Mathbout MF, do Carmo JM, Hall JE, **Roman RJ**, Reckelhoff JF. Postmenopausal hypertension: Role of the sympathetic nervous system in an animal model. Am J Physiol Regul Integr Comp Physiol. 306:R248-R256, 2014 PMID: 24381180. PMCID:PMC3853207

346. Moulana M, Hosick K, Stanford J, Zhang H, **Roman, RJ**, Reckelhoff JF. Sex differences in arachidonic acid metabolites and blood pressure in SHR. Physiol Rep. 2014 May 20;2(5). pii: e12022. doi: 10.14814/phy2.12022. Print 2014 May 1. PMID: 24844641; PMCID:PMC4098748

347. Burke M, Pabbidi MR, Farley J, **Roman RJ**. Molecular mechanisms of renal blood flow autoregulation. Current Vasc Pharmacol 12:845-858, 1014. PMID:24066938 PMCID:PMC4416696

348. **Roman RJ**, Van Dokkum RPE. Commentary on the special issue of the impact of myogenic tone in Health and Disease. Current Vasc Pharmacol. 12:779, 2014 PMID:24066930 PMCID:PMC4419267

349. Colombero C, Venara M, Gonzalez D, **Roman RJ**, Nowicki, S. Cytochrome P4504A inhibitors attenuate the exaggerated natriuretic response to a saline infusion in the hypothyroid rat. 2014 Jun 11;2(6). pii: e12040. doi: 10.14814/phy2.12040. Print 2014 Jun 1. PMID: 24920124; PMCID: PMC4208633

350. Ge Y, Murphy SR, Fan, F, Williams JM, Falck JR, Liu R, **Roman RJ.** Role of 20-HETE in the impaired myogenic and TGF responses of the Af-Art Of Dahl Salt-sensitive rats. Am J Physiol Renal Physiol. 307: F509-F515, 2014. PMID: 25007877 PMCID:PMC4154113

351. Wang X, Johnson AC, Williams JM, White T, Chade AR, Zhang J, Liu R, **Roman RJ**, Lee JW, Kyle PB, Solberg-Woods L, Garrett MR. Nephron deficiency and predisposition to renal injury in a novel one-kidney genetic model. J Am Soc Nephrol. 26:1634-1646, 2015. PMID:25349207 PMCID: PMC4483580

352. Warrington JP, Fan F, Murphy SR, **Roman RJ**, Drummond HA, Granger JP, Ryan MJ. Placental ischemia in pregnant rats impairs cerebral blood flow autoregulation and increases blood-brain barrier permeability. Physiol. Reports2014 Aug 28;2(8). pii: e12134. doi: 10.14814/phy2.12134. Print 2014 Aug 1. PMID: 25168877, PMCID:PMC 4246592

353. Dreisbach AW, Smith SV, Kyle PB, Ramaiah M, Amenuke M, Garrett MR, Lirette ST, Griswold ME, **Roman RJ**. Urinary CYP eicosanoid excretion correlates with glomerular filtration in African-Americans with chronic kidney disease. Prostaglandins Other Lipid Mediat. 113-115L45-51, 2014. PMID: 25151892, PMCID:PMC4396182

354. Fan F, Muroya Y, **Roman RJ**. Cytochrome P450 eicosanoids in hypertension and renal disease. Curr Opin Nephrol Hypertens. 24:37-46, 2015. PMID:25427230; PMCID:PMC4260681

355. Fan F, Geurts AM, Murphy SR, Pabbidi MR, Jacob H, **Roman, RJ**. Impaired myogenic response and autoregulation of cerebral blood flow is rescued in CYP4A1 trangenic Dahl salt-sensitve rat.. Am J Physiol 308:R379-90, 2015. PMID:25540098 PMCID:PMC434676

356. Muroya Y, Fan F, Regner KR, Falck JR, Garrett MR, Juncos LA, **Roman RJ**. Deficiency in the formation of 20-hydroxyeicosatetraenoic acid enhances renal ischemia-reperfusion injury. JASN 26:2460-2469, 2015. PMID:25644108, PMCID: PMC4587700

357. Lu Y, Zhang R, Ge Y, Carlström M, Wang S, Fu Y, Cheng L, Wei J, **Roman RJ**, Wang L, Gao X, Liu R. Identification and function of adenosine A3 receptor in afferent arterioles. Am J Physiol Renal Physiol. 308:F1020-1025, 2015. PMID:25608966 PMCID: PMC4420990

358. Fan F, Geurts AM, Pabbidi MR, Harder DR, Jacob HJ**, Roman RJ**. Zinc-finger nuclease knockout of dual-specificity protein phosphatase-5 enhances myogenic response in autoregulation of cerebral blood flow in FHH.1^{BN} rats. PLoS One Nov 14;9(11):e112878. doi: 10.1371/journal.pone.0112878, 2014 PMID: 25397684 PMCID:PMC 4232417

359. Kojima N, Williams JM, Slaughter TN, Kato S, Takahashi T, Miyata N and **Roman RJ**. Renoprotective Effects of combined SGLT2 and ACE Inhibitor therapy in diabetic Dahl S rats. Physiological Rep. Jul;3(7). pii: e12436. doi: 10.14814/phy2.12436, 2015. PMID:26169541 PMCID: PMC4552522

360. Titze J, Fan F, Muroya Y, **Roman RJ**, Huang C, Pollock CA, Chen XM. Current issue highlights. Curr Opin Nephrol Hypertens. 2015 Jan;24(1):96-103.

361. Lu Y, Zhang R, Ge Y, Carlstrom M, Wang S, Fu Y, Cheng L, Wei J, **Roman RJ**, Wang L, Gao X, Liu . Identification and function of adenosine A3 receptor in afferent arterioles Am J Physiol Renal Physiol. 308(9):F1020-5, 2015.. PMID: 25608966 PMCID: PMC4420990

362. Wang L, Shen C, Liu H, Wang S, Chen X, **Roman RJ**, Juncos LA, Lu Y, Wei J, Zhang J, Yip KP, Liu R. Shear stress blunts tubulogloermualr feedback mediated by primary cilia and nitric oxide at the macula densa. Am J Physiol Regul Integr Comp Physiol. 309:R757-766, 2015. PMID:26269519 PMCID: PMC4666931

363. Lu Y, Wei J, Stec DE, **Roman RJ,** Ge Y, Chen L, Liu EY, Zhang J, Laerkegaard H, Fan F, Ortiz PA, Huang PL, Juncos LA, Wang L, Pollock J, Liu R**.** Macula Densa Nitric Oxide Synthase 1β Protects against Salt-Sensitive Hypertension J Am Soc Nephrol. 2015 Dec 8. pii: ASN.2015050515. [Epub ahead of print]. PMID: 26647426, PMCID: PMC4683305

364. Hye K, Sharma A, Rarick KR, **Roman RJ,** Harder DR, Imig JD. Elevated aminopeptidase P attenurates cerebral arterial response to bradykinin in Fawn-Hooded rats. PLoS One Dec 18;10(12):e0145335. doi: 10.1371/journal.pone.0145335. eCollection 2015.. PMID: 26683993, PMCID: PMC4686180

365. Fan F, Chen CC, Zhang J, Schreck CM, Roman EA, Williams JM, Hirata T, Sharma M, Beard DA, Savin VJ, **Roman RJ.** Fluorescence dilution technique for measurement of albumin reflection coefficient in isolated glomeruli. Am J Physiol Renal Physiol. 309:F1049-59, 2015. PMID: 26447220 PMCID: PMC4683305

366. Fan F, Lv W, Elliott MR, Muroya Y, Hirata T, Booz GW, **Roman RJ**. Molecular mechanisms and cell signaling of 20-hydroxyeicosatetraenoic acid in vascular pathophysiology. Front Biosci. 21:1427-1463, 2016. PMID 27100515 PMCID: PMC in progress

367. Roman RJ, Fan F, Zhuo JL. Intrarenal renin-angiotensin system: locally synthesized or taken up via endocytosis? Hypertension 67:831-833, 2016. PMID:26928807: PMCID:PMC (in process)

368. Gebremedhin D. Zheng X, Carver KA, Rau N, **Roman RJ**, Harder DR. Expression of CYP4A and formation of 20-HETE in brain astrocytes. Prostaglandins and other Lipid Med. 124:16-26, 2016. PMID 27174801.

369. Miller B, Palygin O, Rufanova A, Chong A, Lazar J, Jacob HJ, Mattson D, **Roman RJ,** Williams JM, Cowley AW Jr, Geurts AM, Staruschenko A, Imig JD, Sorokin A. P66 Shc regulates vacular tone in hypertension-induced nephropathy. J Clin Invest 126:2533-2546, 2016. PMID 27270178

370. Fan F, Ge Y, Pabbidi MR and **Roman RJ**. Knockdown of the Expression of Gamma-Adducin Impairs the Myogenic Response of Cultured Rat Renal Afferent Arterioles. Am J Physiol Renal Physiol. 312:F971-F981, 2017. doi: 10.1152/ajprenal.00529.2016. Epub 2016 Dec 7. PMID: 27927653, PMCID: PMC5495887.

371. Pabbidi MR, Roman RJ. Elevated K+ channel activity opposes vasoconstrictor response to serotonin in cerebral arteries of the Fawn Hooded Hypertensive rat. Physiol Genomics. 2017 Jan 1;49(1):27-36. doi:10.1152/physiolgenomics.00072.2016. Epub 2016 Oct 27. PubMed PMID: 27789734; PubMed Central PMCID: PMC5283921.

372. Zhang H, Falck JR, Roman RJ, Harder DR, Koehler RC, Yang ZJ. Upregulation of 20-HETE Synthetic Cytochrome P450 Isoforms by Oxygen-Glucose Deprivation in Cortical Neurons. Cell Mol Neurobiol. 2017 Jan 21. doi: 10.1007/s10571-017-0462-8. PMID: 28110484 PMCID: PMC5522363

373. Wang S, Mims PN, **Roman RJ** and Fan F. Is Beta-Amyloid Accumulation a Cause of Alzheimer's Disease or a Consequence of Vascular Dysfunction? J Alzheimers Dis Parkinsonism. 2016; 4:2. [Epub ahead of print].

374. Wang S, Zeng H, Xie XJ, Tao YK, He X, **Roman RJ**, Aschner JL, Chen JX. Loss of prolyl hydroxylase domain protein 2 in vascular endothelium increases pericyte coverage and promotes pulmonary arterial remodeling. Oncotarget 13:58848-58861, 2016. PMID: 27613846 PMCID: PMC5312280.

375. Ge Y, Fan F, Didion S and **Roman RJ**. Impaired myogenic response of the Af-Art contributes to the increased susceptibility to renal disease in Milan Normotensive Rats. Physiol Rep. 2017; e13089 [Epub ahead of print]. PMID: 28193784, PMCID: PMC5309574

376. Fan F and **Roman RJ**. GPR75 identified as the first 20-HETE receptor: a chemokine receptor adopted by another family. Circ Res. 120: 1696-1698, 2017. PMID:28546348

377. Fan F and **Roman RJ**. Cytochrome P450 metabolites of arachidonic acid in nephrology. JASN 28:2845-2855, 2017. doi: 10.1681/ASN.2017030252 PMID2870518 PMCID: PMC5619976.

378. He X, Zeng H, Chen ST, **Roman RJ**, Aschner JL, Didion S, Chen JX. Endothelial specific SIRT3 deletion impairs glycolysis and angiogenesis and causes diastolic dysfunction. J Mol Cell Cardiol. 112:104-113, 2017. doi: 10.1016/j.yjmcc.2017.09.007 PMID: 28935506

379. Shekhar S, Travis OK, He X, **Roman RJ**, Fan. Menopause and Ischemic Stroke: A Brief Review. MOJ Toxicol 3:00059, 2017 doi: 10.15406/mojt.2017.03.00059. Epub 2017 PMID 28936482 PMCID: PMC5604887

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Highest cited paper (1169)- Roman, RJ**.** P450 metabolites of arachidonic acid in the control of cardiovascular function. Physiological Reviews 82:131-165, 2002.

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https://www.researchgate.net/profile/Richard_Roman/contributions

ABSTRACTS

1. Roman, R.J., and M.L. Kauker. Tracer microinjection studies of digoxin transport in the rat nephron. Fed. Proc. 34:217, 1975.

2. Roman, R.J., J.R. Carter, W.C. North and M.L. Kauker. Renal tubular site of action of methoxyflurane and NaF. Fed. Proc. 35:728, 1976.

3. Roman, R.J., and M.L. Kauker. Micropuncture study of indomethacin effect on renal tubular function in the rat. Pharmacologist 18:162, 1976.

4. Roman, R.J. Micropuncture study of the renal tubular effect of prostaglandin synthetase inhibition in rats. Diss. Abs. 38B:5387, 1978.

5. Roman, R.J., and C.P. Lechene. Effect of superperfusion of the renal papilla with urea on renal concentrating ability. Fed. Proc. 37:816, 1978.

6. Roman, R.J., J.S. Davis and C.P. Lechene. Dose-related effect of clonidine on water and electrolyte excretion. Abstracts of the VII International Congress of Nephrology, Montreal, 1978.

7. Roman, R.J., A.W. Cowley, Jr., and C.P. Lechene. Clonidine induces water diuresis: inhibition of ADH release. Kidney Int. 14:778, 1978.

8. Roman, R.J., and C.P. Lechene. Prostaglandin independent concentrating defect associated with exposure of the renal papilla. Fed. Proc. 38:903, 1979.

9. Bonventre, J.V., R.J. Roman and C.P. Lechene. Effect of vanadate on renal sodium and water excretion. Fed. Proc. 38:1042, 1979.

10. Roman, R.J., and C. Lechene. Microinjecting prostaglandin E_2 (PGE_2) into distal tubules increases urinary recovery of simultaneously injected 14C-urea. Kidney Int. 16:834, 1979.

11. Lechene, C., R.J. Roman, J. Boventre and R. Warner. Electron probe microanalysis of frozen hydrated kidneys. Proceedings of the Second International Low Temperature Biological Microscopy and X-Ray Microanalysis Meeting. Cambridge, England, April, 1981.

12. 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.

13. Roman, R.J., F.R. Sias and A.W. Cowley, Jr. A network computer analysis of fluid reabsorption in the proximal tubule. Kidney Int. 21:288, 1982.

14. Roman, R.J., and C. Lechene. Renal prostaglandins inhibit tubular reabsorption of Na, Cl, Ca and Mg in antidiuretic and water diuretic rats. Kidney Int. 21:164, 1982.

15. 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. 41:1240, 1982.

16. Roman, R.J., and C.P. Lechene. Succinate and protein requirement for sodium reabsorption by rat papillary collecting ducts. Kidney Int. 23:266, 1983.

17. Roman, R.J., and A.W. Cowley, Jr. Impaired pressure diuresis response in spontaneously hypertensive rates. Fed. Proc. 42:873, 1983.

18. Osborn, J.L., and R.J. Roman. Influence of low frequency renal nerve stimulation on renal sodium and bicarbonate excretion. Fed. Proc. 42:737, 1983.

19. Roman, R.J. Influence of hydration state on urinary excretion of prostaglandin E_2 (PGE_2) in spontaneously hypertensive rats (SHR). Kidney Int. 25:335, 1984.

20. Hartupee, D.A., R.J. Roman and C.P. Lechene. Role of renal prostaglandins in the fall in urine osmolality caused by papillary micropuncture through an intact ureter. Kidney Int. 25:329, 1984.

21. Roman, R.J., and M. Skelton. Renal hemodynamics, tubular function and PGE_2 excretion in conscious Dahl rats. Fed. Proc. 43:441, 1984.

22. Sias, R.F. Jr., and R.J. Roman. An interactive computer model for teaching renal physiology. Fed. Proc. 43:1104, 1984.

23. Tan, E., B.J. Barber, D. Zawieja and R.J. Roman. Measurements of protein concentration in rat mesenteric lymph vessels. Fed. Proc. 43:611, 1984.

24. Zawieja, D., B.J. Barber and R.J. Roman. Analysis of protein in subnanoliter size samples. Fed. Proc. 43:611, 1984.

25. Lombard, J.H., G.J. Smits and R.J. Roman. Arteriolar diameter and tissue blood flow in superfused and covered cremaster muscle preparations of spontaneously hypertensive (SHR) and normotensive (WKY) rats. Physiologist 27:284, 1984.

26. Roman, R.J., C.A. Smits and J.H. Lombard. Measurement of microcirculatory blood flow by differential laser-Doppler spectroscopy in the rat gracilis muscle and kidney. Physiologist 27:257, 1984.

27. Sias, F.R., and R.J. Roman. Enhancement of a computer model for teaching renal physiology. Physiologist 27:286, 1984.

28. Roman, R.J. Role of increased vasa recta pressure and flow in the pressure diuresis response. Kidney Int. 27:298, 1985.

29. 1. Takezawa, K., R.J. Roman, A.W. Cowley, Jr. Atrial natriuretic factor potentiates the pressure diuretic natriuretic response. Physiologist 28:285, 1985.

30. Roman, R.J. Abnormal renal hemodynamics and pressure diuresis response in Dahl S rats. Kidney Int. 29:257, 1986.

31. Roman, R.J., C. Smits and M. Kaldunski. Renal prostanoids may influence the pressure-natriuresis response by altering medullary blood flow. Fed. Proc. 45:514, 1986.

32. Kaldunski, M., A. Nasjletti and R.J. Roman. Effects of U63557A, an inhibitor of thromboxane synthesis on renal function. Fed. Proc. 45:648, 1986.

33. Osborn, J.L., J.D. Ewens and R.J. Roman. Renal nerves, sodium balance and development of hypertension in Dahl S rats. Fed. Proc. 45:522, 1986.

34. Roman, R.J. Pressure-natriuresis relationships during the development of hypertension. Hypertension 8:830, 1986.

35. Roman, R.J., M. Kaldunski, G. Scicli and O.A. Carretero. Influence of the renal kallikrein-kinin system on cortical and papillary blood flow. Fed. Proc. 47:370, 1987.

36. Contney, S.J., W.J. Stekiel, R.J. Roman, A.S. Greene and J.H. Lombard. Neural contribution to vascular smooth muscle (VSM) membrane potentials (E_m) of small arteries (A) and veins (V) in SHR, Dahl S and Doca-Salt Rats. Fed. Proc. 47:523, 1987.

37. Sias, F.R. Jr., and R.J. Roman. A renal teaching model with graphics and case studies. Fed. Proc. 47:1519, 1987.

38. Kalkhoff, R., K. Siegesmund and R. Roman. Amino acids and forskolin augment rat islet glucagon secretion by increasing alpha cell calcium influx. Endocrinology 00:000, 1987.

39. Roman, R.J., and M.L. Kaldunski. Papillary blood flow during the development of hypertension in the spontaneously hypertensive rat. Hypertension 10:363, 1987.

40. Roman, R.J., M. Kaldunski, A.G. Scili and O.A. Carretero. Influence of the renal kallikrein kinin system on cortical and papillary blood flow. Kinin 87, Tokyo International Congress, December 1987.

41. Carretero, O.A., R. Roman, W.H. Beirwaltes, P. Madeddu and A.G. Scili. Kinins as paracrine renal hormones. Satellite Symposium of the Kinin 87 Meetings, Sapporo, Japan, 1987.

42. Mattson, D.L., H. Raff and R.J. Roman. Modulation of the pressure-natriuresis response by angiotensin II. Kidney Int. 33:411,1988.

43. Garcia-Estañ, J., R.J. Roman, J. Garancis and E. Lianos. Glomerular prostaglandin production in complement depleted anti-glomerular basement membrane glomerulonephritis in rats. Kidney Int. 33:264, 1988.

44. Harder, D., C. Sanchez-Ferrer and R.J. Roman. Myogenic autoregulation of juxtamedullary blood flow by renal arteries and arterioles. Blood Vessels 00:000, 1988.

45. Sanchez-Ferrer, C.F., R.J. Roman and D.R. Harder. Mechanisms of pressure-dependent contraction in rat afferent arterioles. FASEB J. 2:A1271, 1988.

46. Garcia-Estañ, J., and R.J. Roman. Contribution of changes in cortical and medullary interstitial pressure to the pressure-natriuresis mechanism. FASEB J. 2:A964, 1988.

47. Roman, R.J. and J. Garcia-Estañ. Changes in vasa recta hemodynamics and renal interstitial pressure associated with the pressure natriuresis response. FASEB J. 2:A1271, 1988.

48. 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:A329, 1988.

49. 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:A1716, 1988.

50. Mattson, D.L., H. Raff and R.J. Roman. Effects of captopril and angiotensin II on cortical and papillary blood flow in rats. FASEB J. 2:A1272, 1988.

51. Breshnaham, B.A., E.A. Lianos and R.J. Roman. Effect of thromboxane receptor antagonism on renal hemodynamic perturbations in anti-thymocyte serum nephritis (ATSN). Clin. Res. 37:486A, 1989.

52. Kaldunski, M.L., and R.J. Roman. Pressure-natriuresis in the Rapp strain of Dahl rats. FASEB J. 3:A1017, 1989.

53. Mattson, D.L., and R.J. Roman. Role of kinins in the renal response to converting enzyme inhibition in hydropenic rats. FASEB J. 3:A1017, 1989.

54. Roman, R.J., C. Sanchez-Ferrer and D.R. Harder. Myogenic tone in the rat juxtamedullary renal vasculature treated with indomethacin. FASEB J. 3:A1399, 1989.

55. Kauker, M.L., L. Haag and R.J. Roman. Nisoldipine influence on calcium excretion and renal hemodynamics. Abstracts of the Third International Conference on Diuretics, Mexico City, 1989.

56. Cowley, A.W., Jr., K.M. Cross, R.B. Cross and R.J. Roman. Renal interstitial pressure in the conscious dog. J. Physiol. (Lond.):32P, 1989.

57. Clark, J.E., R.J. Roman, Y.-H. Ma, A.S. Muerhoff, K. Kauser, D.R. Harder and B.S. Masters. Cytochrome P450-dependent metabolism of arachidonic acid by microsomes from renal vessels. FASEB J. 4: A846, 1990.

58. Roman, R.J., A.S. Muerhoff, J.E. Clark and B.S.S. Masters. Intrarenal infusion of an inhibitor of cytochrome P450 w-hydroxylation of arachidonic acid. FASEB J. 4:A437, 1990.

59. Ma, Y.-H., D.R. Harder, J.E. Clark and R.J. Roman. Effects of 12-hydroxyeicosatetraenoic acid (12-HETE) on dog renal arteries. FASEB J. 4:A846, 1990.

60. Kauser, K., J.E. Clark, B.S.S. Masters, D.R. Harder and R.J. Roman. Inhibitors of cytochrome P450 attenuate the myogenic response of dog renal arcuate arteries. FASEB J. 4:A1112, 1990.

61. Kaldunski, M.L., and R.J. Roman. Cortical and papillary blood flow in Dahl rats. FASEB J. 4:A647, 1990.

62. Fenoy, F.J., and R.J. Roman. Role of kinins in papillary blood flow and natriuretic response to volume expansion. FASEB J. 4:A647, 1990.

63. Gebremedhin, D., R.J. Roman and D.R. Harder. Enhanced myogenic activity in spontaneously hypertensive rat renovasculature. FASEB J. 4:A1077, 1990.

64. Tonellato, P.J., A.S. Greene, D. Gebremedhin, D.R. Harder and R.J. Roman. A mathematical model of pressure-dependent contraction in rat juxtamedullary microcirculation. FASEB J. 4:A1273, 1990.

65. Roman, R.J. Enhanced loop chloride reabsorption contributes to the blunted pressure-natriuretic response in Dahl S rats. Hypertension 16:324, 1990.

66. Fenoy, F., G. Scicli, O. Carretero and R. Roman. Role of kinins on the renal cortical and papillary hemodynamic responses to captopril. Hypertension 16:341, 1990.

67. Ma, Y-H., J.E. Clark, D.R. Harder, B.S. Masters and R.J. Roman. 20-hydroxeicosatetraenoic acid (20-HETE) is an endogenous vasoconstrictor of small renal arteries. Pharmacologist 32:32, 1990.

68. Kauker, M.L., E.T. Zawada, L.M. Castle and R.J. Roman. Renal hemodynamic and tubular effects of a calcium channel blocker, nisoldipine. Am. Heart J. 00:000, 1990.

69. Ma, Y.-H., K. Kauser, J.E. Clark, D.R. Harder, B.S. Masters and R.J. Roman. Role of cytochrome P450 arachidonic acid metabolites in the myogenic response of dog renal arcuate arteries. J. Am. Soc. Nephrol. 1:668, 1990.

70. Salom, M.G., V. Lahera, F.J. Fenoy, R.J. Roman and J.C. Romero. Role of endothelium-derived relaxing factor in the renal response to changes in renal perfusion pressure. J. Am. Soc. Nephrol. 1:670, 1990.

71. Cowley, A.W. Jr., R.J. Roman and J.E. Krieger. Pathways linking renal excretion and arterial pressure. Hypertension 00:000, 1991.

72. Gebremedhin, D., Y.-H. Ma, R.J. Roman, M. Van Rollins and D.R. Harder. Cellular mechanism of cerebral epoxyeicosatrienoic acids (EETS) on cat cerebral arterial smooth muscle. FASEB J. 5:A741, 1991.

73. Roman, R.J., D. Gebremedhin, Y.-H. Ma and D.R. Harder. Role of cytochrome P450 in the enhanced vascular tone in the in vitro perfused juxtamedullary microvascular of SHR. FASEB J. 5:A1042, 1991.

74. Ma Y.-H., D.R. Harder and R.J. Roman. Metabolism of arachidonic acid (AA) by cytochrome P450 in the renal cortical and outer medullary microsomes of inbred Dahl rats. FASEB J. 5:A1485, 1991.

75. 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:A1482, 1991.

76. Fenoy, F.J., M.L. Kauker, I. Milicic and R.J. Roman. Role of changes in papillary blood flow in the natriuretic response to nisoldipine in SHR. FASEB J. 5:A737, 1991.

77. 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:A1040, 1991.

78. Kauser, K., D.R. Harder and R.J. Roman. Role of cytochrome P450 metabolites in the pressure dependent myogenic response of isolated renal arteries. Third International Symposium of Resistance Arteries, Denmark, 1991.

79. Stiemke, M.M., R.J. Roman, M.L. Palmer and H.F Edelhauser. Sodium activities and concentrations of the corneal stroma, aqueous humor and plasma in the presence and absence of a transparent cornea. J. Invest. Ophthalmol. 00:000, 1991.

80. Harder, D.R., Y.-H. Ma, B.S. Masters, J. Clark, M. Van Rollins and R.J. Roman. P450 metabolites in the regulation of the myogenic response in cerebral and renal arteries. Third International Symposium on Resistance Arteries, Denmark, 1991.

81. Harder, D.R., R.J. Roman, D. Gebremedhin and Y.-H. Ma. Physiological regulation K channel activity in cerebral arterial muscle. J. Mol. Cell Cardiol. 00:000, 1991.

82. Mistry, M., M. Reis, R. Roman and T. Mecca. Renal and systemic actions of calcium channel blocker, clintiazem, in Wistar-Kyoto and Spontaneously Hypertensive rats (SHR). Am. J. Hypertens. 4:85A, 1991.

83. Hudetz, A.G., C.G.M. Weigle, F.J. Fenoy and R.J. Roman. Use of fluorescent erythrocytes and digital cross-correlation to measure flow velocity in the cerebral microcirculation. Fifth World Congress for Microcirculation, 1991.

84. Imig, J., D. Gebremedhin, D.R. Harder and R.J. Roman. Role of nitric oxide in the vasoconstrictor response to erythrocytes in the in vitro juxtamedullary nephron microvascular preparation. Fifth World Congress for Microcirculation, 1991.

85. Imig, J., and R. Roman. Nitric oxide modulates renal vascular tone in preglomerular arterioles. Hypertension 18:413, 1991.

86. Mattson, D.L., R.J. Roman and A.W. Cowley, Jr. Role of nitric oxide on renal juxtamedullary blood flow and sodium excretion. Hypertension 18:415, 1991.

87. Ma Y.-H., and R.J. Roman. Renal metabolism of arachidonic acid in Dahl S/Jr and R/Jr rats. Hypertension 18:380, 1991.

88. Breshnahan, B.A., F.J. Fenoy, R.J. Roman and E.A. Lianos. Mesangial cell immune injury: role of thromboxane in glomerular hemodynamics. J. Am. Soc. Nephrol. 2:425, 1991.

89. Harder, D.R., J. Narayanan, Y.-H. Ma and R.J. Roman. Activation of phospholipase C and induction of 2nd messengers in pressurized renal arterioles. FASEB J. 6:A1733, 1992.

90. Imig, J.D., D.R. Harder, D. Gebremedhin and R.J. Roman. Role of cytochrome P-450 in elevating renovascular tone in young spontaneously hypertensive rats. FASEB J. 6:A1470, 1992.

91. Modell, H.I., L.G. Navar and R.J. Roman. Computer simulations for teaching renal physiology. FASEB J. 6:A1521, 1992.

92. Ma, Y.-H., and R.J. Roman. Sex differences in the renal metabolism of arachidonic acid by cytochrome P450 in inbred Dahl rats. FASEB J. 6:A1470, 1992.

93. Gerboth, G., S.S. Lindblom, R.J. Roman and E.R. Jacobs. Simultaneous measurement of intracellular pH, and calcium in freshly isolated rat alveolar epithelial cells. FASEB J. 6:A1737, 1992.

94. Clark, J.E., R.J. Roman, Y.-H. Ma, D.R. Harder and B.S.S. Masters. Cytochrome P450 w-hydroxylation of fatty acids and eicosanoids by microsomes from renal arteries, medulla and cortex. FASEB J. 6: A1568, 1992.

95. Imig, J.D., F.J. Fenoy, P.R. Ortiz de Montellano, Z. Sui and R.J. Roman. Cytochrome P450 Inhibitors alter renal vascular autoregulatory responses to changes in perfusion pressure. Hypertension 19: 402, 1992.

96. Roman, R.J., Y.-H. Ma, B. Frohlich and B. Markham. Clofibrate prevents salt-hypertension in S/Jr rats. Hypertension 19: 426, 1992.

97. Lianos, E.A., B.A. Bresnahan, S.-H. Wa, F.J. Fenoy and R.J. Roman. Mesangial cell immune injury: hemodynamic role of leukocyte-and platelet derived eicosanoids. Abstracts 8th International Meeting Prostaglandins and Related Compounds, Montreal, July 26-31, 1992, p. 165.

98. Imig, J.D., J.R. Falck, R.J. Roman. 20-hydroxyeicosatetraeonic acid (20-HETE) is a potent endogenous constrictor of renal arterioles. FASEB J. 7:A888, 1993.

99. 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:A7, 1993.

100. Gebremedhin, D., M. Kaldunski, R.J. Roman, D.R. Harder. Characterization of single channel K channel recorded from renal preglomerular arteriolar smooth muscle cells. FASEB J. 7: A759, 1993.

101. Lu, S.H., D.L. Mattson, R.J. Roman, A.W. Cowley Jr. Assessment of changes in intrarenal blood flow in conscious rat using implanted laser-Doppler flowmetry. FASEB J. 7: A324, 1993.

102. Zou, A. P., J. D. Imig, F. J. Fenoy, P.R. Ortiz de Montellano, Z. Sui, and R.J. Roman. Role of endogenous metabolites of arachidonic acid in tubuloglomerular feedback response. Hypertension 22: 414 , 1993.

103. St. Lezin., E., A. Wong, J.-M. Wang, M. Pravenec, D. Stec, H. Jacob, R. Roman, T. Kurtz. Transfer of the Dahl S renin gene into the Dahl R strain does not promote salt-sensitivity and may actually decrease blood pressure. Hypertension 22:421, 1993.

104. Imig, J. D., A.-P. Zou, D.E. Stec, J. F. Liard, D.R. Harder, and R. J. Roman. Oxygen-dependent production of 20-HETE by renal microvessels. Hypertension 22:428, 1993.

105. St. Lezin, E.M., M. Pravenec, A. Wong, J. Wang, T. Merriouns, S. Newton, D. Stec, R. Roman, R.O. Morris, T.W. Kurtz. Genetic Contaimination of commercially available Dahl salt-sensitive rats. Am. J. Hypertension 7: 10A, 1994.

106. Stec, D.E., J.E. Krieger, H.J. Jacob, and R.J. Roman. Contribution of cytochrome P4504A to the development of hypertension in SHR. FASEB J. 8:421, 1994.

107. R.J. Roman, A.P. Zou, D. Gebremedhin, J. Imig, J. Fleming, and D.R. Harder. P450 metabolites of arachidonic acid (AA) in the regulation of vascular tone: Implications for hypertension research. Am. J. Hypertension 7 (part 2): 6A, 1994.

108. Zou, A.P., J.T. Fleming, J.R. Falck, E.R. Jacobs, D. Gebremedhin, D.R. Harder, and R.J. Roman. Regional and stereospecific effects of 11,12-Epoxyeicosatrienoic acid on vasular tone and K channel activity in renal arterioles. Hypertension 24:382, 1994.

109. Jiang, J. and R.J. Roman. Chronic antilipidemic therapy lowers arterial pressure and small G protein activity in SHR. FASEB J. 9:000, 1995.

110. Alkayed, N.J., J Narayanan, A. Lange, M Medhora, R.J. Roman, and D.R. Harder. Identification of an arachidonic acid (AA) epoxygenase in rat brain astrocytes. FASEB J. 9:A262, 1995.

111. Narayanan, J., E.K. Birks, J.D. Imig, R.J. Roman, and D.R. Harder. Cytochrome P4504 activity is dependent on oxygen concentration and may serve as the oxygen sensor in microvessels. FASEB J. 9:A266, 1995.

112. Rieder, M.J., N., J. Alkayed, D.R. Harder, R.J. Roman and A.S. Greene. Molecular cloning of angiotensin II type 2 receptor from rat cerebral microvessels. FASEB J. 9:A24, 1995.

113. Lombard, J.H., J.T. Fleming, J.F. Liard, and R.J. Roman. Blockade of arachdionic acid metabolism by cytochrome P450 inhibits constriction of rat cremasteric arterioles in response to elevated PO2. FASEB J. 9:000, 1995

114. Roman, R.J. , A.W. Cowley Jr. and D. Mattson. Renal medullary mechanisms in hypertension. Am. J. Hypertension 8:24A, 1995.

115. Trolliet M.R., J.E. Krieger, G. Koike, J. Simon, E.M. Krieger, D. Stec, R. Roman, E.S. Lander, V.J. Dzau, and H.J. Jacob. Sex specific and sex linked influences on blood pressure in the SHR. Hypertension 25:1375, 1995.

116. Zou, A.P., and R.J. Roman. Role of 20-HETE in elevating loop Cl- transport in Dahl S rats. Hypertension 27:574, 1995.

117. Stec, D.E., A. Deng, J.P. Rapp and R.J. Roman. Cosegregation of P4504A genotype with hypertension in Dahl S rats. Hypertension 27:537, 1995.

118. Simon, J.S., R.J. Roman, A.W. Cowley Jr., A. Greene, H.J. Jacob. Rat alpha-2 adrenergic receptor class III is linked to systolic blood pressue after salt-load in genetic hypertension. Hypertension 27:537, 1995.

119. Jiang, J., D.E. Stec, and R.J. Roman. Transfer of the Dahl R renin allele raises plasma renin activity and blood pressure in Dahl S rats. FASEB J 10:A278, 1996.

120. Mattson, D.L., R.J. Roman, M.M. Skelton, L. Henderson, T.G. Bellehumeur, and A.W. Cowley, Jr. Renal Medullary nitric oxide synthetase actitivy in rats on low and high salt diets. FASEB J 10:A565, 1996.

121. Jiang, J. and R.J. Roman. G Protein levels in the renal microcirculation of spontaneously hypertensive rats. FASEB J 10:000, 1996.

122. Stec, D.E., D.L. Mattson, and R.J. Roman. Site specific pharmacologic knockout of renal outer medullary P4504A activity produces salt-sensitive hypertension in normotensive Lewis rats. Hypertension 28: 522, 1996.

123. Drummond, H.A., K.R. Catipally, J.R. Falck, and R.J. Roman. Inhibition of 20-HETE contributes to the renal and peripheral vascular responses to nitric oxide. Hypertension 28:549, 1996.

124. Sun,C. D.R. Harder and R.J. Roman. Inhibitory action of 20-HETE on Ca-activated K channel may involve a G-protein dependent mechanism. FASEB J 11:A503, 1997.

125. Maier K., J. Passmore, J. X Sun and R. Roman. Dysfunction of rho and Gq/11 signal transduction mechansims in rthe reanl cortex in aging. FASEB J 11:000, 1997.

126. Alonso-Galicia, M., J.R. Falck, D.R. Harder, and R.J. Roman. Structural determinants of the renal vascular response to 20-hydroxyeicosatetraenoic acid (20-HETE). FASEB J 11:A244, 1997.

127. Hopp, KA, O Ito, and R.J. Roman Localization and quanitation of P4504A mRNA in microdissected nephron segments by RT-PCR. FASEB J 11:197, 1997.

128. Lu G, B. Mazet, C. Sun, X. Qian, G.L. Telford, R.J. Roman, and S.K. Sarna. Characterization of calcium activated potassium currents in human colonic circular smooth muscle cells. Am Gastoenterological Association 00:000, 1997.

129. Lu G, B. Mazet, C. Sun, X. Qian, C.P. Johnson, M.B. Adams, R.J. Roman. Inflammation modulates calcium ativated potassium channel activity in canine colonic circular smooth muscle cells. Am Gastroenterological Society 00:000, 1997.

130. Zou A.P., K. Nithipatikon, P.L. Li, R.J. Roman, A.W. Cowley, Jr. Altered renal adenosine metabolism and glomerular hypertension in Dahl S/Jr rats. FASEB J 11:000A, 1997.

131. Wu F., O Ito, P.L. Li, R.J. Roman, A.P. Zou, A.W. Cowley Jr. Microassay of 5'-Nucleotidase and adenosine deaminase in microdissected nephron segments of rats. FASEB J 11:000, 1997.

132. Lombard J.H., R.J. Roman, D.R. Harder, and W.F. Jackson. Role of 20-HETE in mediating)2-induced constriction of arterioles in the hamster microcirculation. FASEB J 11:000,1997

133. Alonso-Galicia, M., B. Frohlich and R.J. Roman. Induction of renal P4504A activity with clofibrate normalizes pressure-natriuresis and prevents hypertension in Dahl S rats. Hypertension 29 :000, 1997.

134. Okamoto, H., R.J. Roman, J.P. Kampine, and A.G. Hudetz. Expression of inducible isoforms of nitric oxide synthase and cyclooxygenase plays an important role in endotoxin-induced cerebral hyperremia in rats. J Cerebral Blood Flow and Metab 00:000, 1997.

135. Wilson T.W., M. Alonso-Galicia, K.A. Hopp, R.J. Roman. Antihypertensive and renoprotective effects of antilipidemic agents in Dahl S rats. Hypertension 29:000, 1997.

136. Alonso-Galicia, M., CW Sun, R.J. Roman. Inhibiton of 20-HETE production mediates the cGMP-independent effects of nitric oxide in the renal microcirculation. JASN 8:343A,1997.

137. Ito O, M. Alonso-Galicia, KA Hopp, RJ Roman. Localization of cyotchrome P4504A isoforms along the rat nephron. JASN 8:414A, 1997.

138. Sun C., M. Alonso_Galicia, JR Falck, DR Harder and RJ Roman. NO-20-HETE interaction in the regulation of K channel activity in renal arterioles. FASEB J 12:A107, 1998.

139. Raza T, L St. Tomas, D.Zhu, RM Effros, K Presberg, RJ Roman, ER Jacobs. Distribution of 20-HETE in lavage fluid of rabbits. Am J Respiratory:Critical Care Med. 157:A365, 1998.

140. Van Dokkum, RPE, AP Provoost, HJ Jacob and RJ Roman. Intraglomerular hypertension and hyperfiltration due to impaired renal autoregulation in the Fawn-Hooded rat. Am J Hypertension. 11: 1A, 1998.

141. VanDokkum RPE, H.J. Jacob, AP Provoost and R.J. Roman. Increased intraglomerular pressure in Fawn-Hooded hypertensive rats due to impaired autoregulation of renal blood flow. J Hypertension 16:189, 1998.

142. Jacob HJ, M Runte, MM Peiffere, OS Granados, RJ Roman, AW Cowley jr. Genome cassette system for determining genes and their function in hypertension. J Hypertension. 16:000, 1998.

143. Evans RG, K. Day, R.J. Roman, K.H. Hopp and W.P Anderson. Cytochrome P450 arachidonate w-hydroxylase and responses to increased renal perfusion pressure in anaesthetised rabbits. J Hypertension 16:000, 1998.

144. Nadig V. T.A. Kotchen, AW Cowley, CE Grim, P Hamet, H Jacob, JM Kotchen, R Roman. Heritability of blood pressure and blood pressure determineants in hypertensive-dyslipidemic African Americans. Am J Hypertension 11: 195A, 1998.

145. Cowley, AW Jr.., R Roman, A Green, P Tonellato, T Kotchen, P Hamet, D Gaudet, and H Jacob. Hunting for genes of hypertension: A novel paradigm. Am J Hypertension. 11,242A, 1998.

146. Roman RJ. P450 metabolites of arachidonic acid in the control of vascular tone. IOVS 39:S9, 1998.

147. Roman RJ. Inhibition of 20-HETE formation contributes to the vasodilator effect of NO in the renal and cerebral arterioles. Physiologist 41:270, 1998.

148. Van Dokkum RPE, CW Sun, AP Provoost, HJ Jacob, RJ Roman. Impaired autoregulationof RBF and myogenic response in the Fawn Hooded (FHH) rat. Hypertension 32:602, 1998.

149. Sun CW, RJ Roman. Role of PKC and tyrosine kinase in mediating the effects of 20-HETE on K channels and vascular tone in renal arterioles. Hypertension 32:622, 1998.

150. Alonso-Galicia M, CW Sun, DR Harder, RJ Roman. Blockade of 20-HETE formation mimics the vasodilator response to nitric oxide in renal arterioles. Hypertension 32:616, 1998.

151. Alonso-Galicia M, CW Sun, DR Harder, RJ Roman. A fall in 20-HETE levels contributes to the vasodilator actions of nitric oxide in the cerebral microcirculation. Hypertension 32:599, 1998.

152. Ito 0, RJ Roman. A deficiency in the formation of 20-HETE elevates chloride transport in isolated perfused thick ascending loop of Henle of Dahl S rats. Hypertension 32:616, 1998.

153. VanDokkum RPE, AP Provoost, C-W, Sun, HJ Jacob and RJ Roman. Impaired renal vascular responses in the Fawn Hooded hypertensive rat. JASN 00:000-000, 1998.

154. Roman, R.J. P450 eicosanoids: Novel signaling pathways regulating renal function and vascular tone. Circulation (suppl I) 98:IB, 1998.

155. Roman, RJ. Role of renal cytochrome P450 pathway in hypertension. Am J Hypertension 12: 215A, 1999.

156. Cowley, AW Jr., RJ Roman, AS Greene, HJ Jacob, ML Kaldunski. Renal phenotypic and gender differences between Dahl S/MCW and Brown Norway/MCW rats. FASEB J 13:000, 1999.

157. Cowley AW Jr, HJ Jacob, RJ Roman, AS Greene, ML Kaldunski, M Stoll and PJ Tonellato. Genetic and phenotypic differences of Dahl S/MCW and Brown Norway/MCW inbred rats. FASEB J 13:000, 1999.

158. Alonso-Galicia M., AS Greene, TM Kurth, AW Cowley, and RJ Roman. 20-HETE contributes to the renal vasoconstrictor actions of angiotensin II. FASEB J 13:000, 1999.

159. Maier KG, JC Falcone, IG Joshua, RJ Roman and JC Passmore.Altered renal vascular signaling associated with age. FASEB J 13:000, 1999.

160. Maier KG, J Passmore, I Joshua and RJ Roman. Differential effects of 20-HETE and nitroprusside on renal cortical G protein activity. FASEB J. 13:000, 1999.

161. Sun CW, DR Harder and RJ Roman Contribution of cGMP versus 20-HETE in the vasodilator response to NO in rat middle cerebral arterioles. FASEB J. 13:000, 1999.

162. Zhu, D, RJ Roman, DR Harder, R Rossi, RM Rossi, ER Jacobs. Epoxyeicosatrienoics acids (EETs) increase the state of activation of rabbit pulmonary arteries. FASEB J 13:000, 1999

163. Zhu, D, R Khayat, T Raza, L Sto Tomas, K Presberg, RJ Roman, DR Harder, J Baker and ER Jacobs. Chronic hypoxia induces epoxyeicostrienoic acids in neonatal rabbit lungs. Am. J. Respiratory:Critical Care Med. 158:A000, 1999.

164. Kotchen TA, AW Piering, K Bell, AW Cowley Jr, CE Grim, D Gaudet, P Hamet, ML Kaldunski, JM Kotchen, and RJ Roman. Glomerular hyperfiltration in hypertensive African Americans. Hypertension 34:334, 1999.

165. Sun C-W and RJ Roman. 20-HETE contributes to the inhibition of K channel activity and the vasoconstrictor effect of angiotensin II in rat renal arterioles. Hypertension 34:338 1999.

166. Ito O, K Omata, S Ito, and RJ Roman. Induction of the formation of P450 metabolites of arachidonic acid in the kidney by angiotensin converting enzyme inhibitor. Hypertension 34:360, 1999.

167. Alonso-Galicia M, JR Falck, and RJ Roman. 20-HETE agonists and antagonists in the renal circulation. Hypertension 34:362, 1999.

168. Kaldunski, ML, K Bork, M Stoll, HJ Jacob, RJ Roman, AS Greene, AW Cowley Jr. Genetic linkage of blood pressure responsiveness in an F2 population derived from Brown Norway and Dahl SS rat intercross. FASEB J 14:A52, 2000.

169. Cowley AW Jr, M Stoll, ML Kaldunski, TM Kurth, AS Greene, and RJ 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 34:333, 1999.

170. Omato, H., X. Wang, D.R. Harder and R.J. Roman. Regional differences in cytochrome P4504A1,2,3,8 and 2C11 mRna expression in the rat cerebral microcirculation. FASEB J. 14:A152, 2000.

171. Maier, K.G., L. Henderson, J. Narayanan, J.R. Falck, D.R. Harder and R.J. Roman. A rapid and sensitive fluorescent HPLC assay for HETEs and EETs. FASEB J. 14:A140, 2000.

172. Dahly, A.J., A.K. Flasch, K.M. Hoagland, S. Ledbetter and R.J. Roman. Chronic anti-TGFb therapy improves blood pressure and renal function in Dahl S rats. FASEB J. 14:A133, 2000.

173. Amaral, S.L., R.J. Roman, and A.S. Greene. Renin angiotensin system modulation of VEGF expression and angiogenesis in chromosome 13 congenic Dahl Rats. FASEB J. 14:A710, 2000.

174. Nobrega, M.A., R.J. Roman, and H.J. Jacob. Genetics of proteinuria and dislipidemia in the diabetic GK rat. FASEB J. 14:A52, 2000.

175. Roman, R.J., A.S. Greene, M. Stoll, M.L. Cowley, P.J. Tonellato, H.J. Jacob, and A.W. Cowley Jr. Quantitative trait loci (QTLs) contributing to development of glomerulosclerosis in Dahl S rats. FASEB J. 14:A52, 2000.

176. Alonso-Galicia, M, K.G. Maier, and R.J. Roman. 1-aminobenotriazole does not prevent angiotensin II-induced hypertension. FASEB J 14:A368, 2000.

177. 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:A95, 2000.

178. Hoagland, K., M Alonso-Galicia, F. Fenoy, A. Flasch, M. Garrett, H. Jacob, M. Nobrega, J. Rapp and R. Roman. Altered blood pressure and renal function in chromosome 5 congenic Dahl salt-sensitive rats. J. Hypertension 18 (suppl. 4):S10, 2000.

179. Alonso-Galicia, M., A. Greene, T. Kurth, A. Cowley, and R. Roman. Contribution of 20-hydroxyeicosatetraenoic acid to the renal and peripheral vascular actions of angiotensin II. J. Hypertension 18 (suppl. 4):S18, 2000.

180. Greene A., A. Cowley, Jr., M. Stoll, M. Kaldunski, R. Roman, P. Tonellato, N. Shork, and H. Jacob. Genetic components of vascular sensitivity defined with a population of F2 rats from a Brown Norway and Dahl S derived intercross. J Hypertension 18 (suppl. 4):S92:2000.

181. M. Stoll, A. Cowley, A. Greene, M. Kaldunski, P. Tonellato, Z Wang, and H. Jacob. Dissecting the genetics of hypertension using likely determinant phenotypes and pharmacogenetics. J. Hypertension 18: S170, 2000.

182. Ito, K. Omato, S. Ito, and R. Roman. Effects of angiotensin converting enzyme inhibitors on renal P450 metabolism of arachidonic acid. J. Hypertension 18:S227, 2000.

183. Sun, C.W., D.R. Harder, and R.J. Roman cGMP-dependent calcium densensitization contributes to vasodilator reposne to nitric oxide in rat middle cerebral arteries. Hypertension 26:719, 2000.

184. Cowley, A.W., Jr., 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 genetic background confers protection from a high salt diet. Hypertension 26:717, 2000.

185. Hoagland, K.M., M. Alonso-Galicia, K.G. Maier, X. Wang, H.J. Jacob, M. Nobrega, J.P. Rapp, M.R. Garrett, and R.J. Roman. Evaluation of P4504A genes for hypertension and renal disease using chromosome 5 congenic strains of rats. Hypertension 26:687, 2000.

186. Amaral S.L., R.J. Roman, and A.S. Greene. Renin gene transfer restores angiogenesis and VEGF expression in Dahl S rats. Hypertension 26: 730, 2000.

187. Dahly, A.J., A.K. Flasch, K.M. Hoagland, S. Ledbetter, and R.J. Roman. Chronic Anti-TGF-b therapy reduces proteinuria and renal injury in hypertensive rats. JASN 11:332A, 2000.

188. Okamoto, H., K.G. Maier, D.R. Harder, and R.J. Roman. An inhibitor of 20-HETE formation attenuates the fall in cerebral blood flow following subarachnoid hemorrhage. Anesthesiology 00:000, 2000.

189. Hoagland, K.M., M.R. Garrett, J.P. Rapp, and R.J. Roman. Improved pressure-natriuresis in chromosome 5 congenic Dahl S rats. FASEB J 15:A448, 2001.

190. Hoagland, K.M., K.G. Maier, S.L. Godbert, M.R. Aebly, A.K. Flasch, and R.J. Roman. Effect of dietary salt on renal metabolism of arachdionic acid in inbred strains of rats. FASEB J 15:A147, 2001.

191. Maier, K.G., M.R. Taheri, C. Moreno, and R.J. Roman. Regulation of CYP4504A activity by nitric oxide. FASEB J. 15:A133, 2001.

192. Moreno, C., F.J. Fenoy, K.M. Hoagland, K.G. Maier, M.R. Garrett, J.P. Rapp, and R.J. Roman. Transferring the CYP4A region of chromosome 5 reduces glomerular capillary pressure and glomerular injury in congenic Dahl S rats. FASEB J 15:A133, 2001.

193. Kehl F, H. Okamoto H, K.G. Maier, D. R. Harder, and R.J. Roman. Blockade of 20-HETE formation attenuates the fall in cerebral blood flow following subarachnoid hemorrhage. FASEB J 15:A127, 2001.

194. Frisbee J.C., R.J. Roman, J.R. Falck, and J.H. Lombard. 20-HETE modulates myogenic activity of skeletal muscle resistance arteries from hypertensive Dahl salt-senstitive rats. FASEB J 15:A122, 2001.

195. 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:A486, 2001.

196. Sylvester FA, J.C. Frisbee, R.J. Roman, J.R. Falck, J.H. Lombard. The effect of acute high slat diet on mediators of acetylcholine reactivity in rat middle cerebral artery. FASEB J 15:A122, 2001.

197. Frisbee J.C., R.J. Roman, J. R. Falck, J.H. Lombard. Altered mechanisms of hypoxic dilation of skeletal muscle resistance arteries in normotensive and hypertensive Dahl rats. FASEB J 15:A104, 2001.

198. Frisbee J.C., R.J. Roman, J.R. Falck, J.H. Lombard. Responses of skeletal muscle resistance arteries to alteredd PO2 are prostanoid- and 20-HETE dependent. FASEB J 15:A36, 2001.

199. Yu M, McAndrew RP, Al Saghir RA, Medhora M, Roman RJ, Jacobs JH. 20-HETE dilates bovine pulmonary artery rings in an NO- and endothelial dependent manner. FASEB J. 16:A76, 2002.

200. Frisbee JC, Maier KG, Roman RJ, Falck JR, and Lombard JH. Dilation of skeletal muscle resistance arteries to incremental hypoxia: An integration of signaling pathways. FASEB J. 16:A79, 2002.

201. Schulte ML, Kehl F, Wood JD, Hudetz AG and Roman RJ. 20-HETE blockade reverses cerebral cortical hypoperfusion in a rat subarachnoid hemorrhage model. FASEB J. 16:A120, 2002.

202. Mattson DL, Kunert MP, Bregantini MC, Roman RJ, Cowley AW Jr. Chromosomal substitution reveal genes of hypertension and renal disease on chromosomes 13 and/or 16 of the Dahl SS/Mcw rat. FASEB J. 16:A416, 2002.

203. Hagemeier R, Maier K, Klum R, Henderson L, Skeleton MM, Cowley AW Jr and Roman RJ. HPLC assay for the measurement of biopterin levels: An index of oxidative stress. FASEB J. 16:A429, 2002.

204. Hoagland KM, Flasch AK, Jackson LJ, Roth M and Roman RJ. Chronic blockade of the production of CYP450 metabolites of AA confers salt-sensitivity in Sprague-Dawley rats. FASEB J. 16:A7487, 2002.

205. Hoagland KM, Flasch AK, Knepper MA, and Roman RJ. Targeted proteomics reveals that abnormalites in the expression of ROMK and CYP4A proteins contribute to elevated Cl transport in TALH of Dahl S rats. FASEB J. 16:A842, 2002.

206. Yu M, Sun C-W, Maier KG, Harder DR, and Roman RJ. Mechanism of cGMP contribution to the vasodilator response to NO in rat middle cerebral arteries. FASEB J. 16: A847, 2002.

207. Capunar-Sapunar L, Yu M, Harder DR and Roman RJ. Blockade of the 5HT 1B receptors reduce the initial fall of cerebral blood flow following SAH in rat. FASEB J. 16:A845, 2002.

208. Kehl F, Maier KG, Miyata N, Kametani S, Falck JR, Harder DR and Roman RJ. The 20-HETE antagonist WIT-002 attenuates the acute reduction of cerebral blood flow after subarachnoid hemorrhage (SAH) in the rat. FASEB J. 16:A845, 2002.

209. Hoagland K, Maier KM, and Roman RJ. Contribution of 20-HETE to the antihypertensive effect of tempol. Hypertension 40: 380, 2002.

210. Zagarac D, Yarnaura K, Zeng C, Roman RJ and Harder DR. The effect of superoxide anion on autoregulation of cerebral blood flow. Hypertension 40: 394, 2002.

211. Moreno C, Dumas P, Stoll M, Greene AS, Kaldunski M, Roman RJ, Tonellato PJ, Wang Z, Jacob HJ and Cowley AW Jr. Gender differences in the genetic determinants of hypertension. Hypertension 40: 385, 2002.

212. Dahly AJ, Ledbetter SR, Roman RJ. Sexual dimorphism in Dahl S rats with chronic anti-TGFb antibody therapy in renal pathology. JASN 13: 78A, 2002.

213. Lazar J, Jensen-Seaman MI, Shiozawa M, Barreto NE, Jene S, Majewski R, Provoost AP, Roman RJ, and Jacob HJ. Physical mapping and congenic development for a renal failure QTL (Rf-1) in a rat model. JASN 13: 83A, 2002

214. Santos EA, Wenberg NH and Roman RJ. Acute effect of a 20-HETE antagonist 6 (Z), 15 (Z)-hydroxyeicosadienoic acid on renal function in rats. JASN 13: 84A, 2002.

215. Moreno C, Ryan RP, Jene S, Kennedy K, Ecker JV, Jacob HJ, Provoost AP, and Roman RJ. Autoregulation of renal blood flow is linked to the Rf-1 region in the Fawn Hooded rat. JASN 13: 515A, 2002

216. Jha S, Ling H, Li X, Joshi H, Dahly AJ, Roman RJ, Ledbetter S. Differential expression and localization of transforming growth factor-b (TGFb) isoforms in the kidneys of renal disease models. JASN 13: 344A, 2002.

217. Bylund J, Harder A, Maier KG, Roman RJ, and Harder DR. w-side chain hydroxylation of leukotriene B4 by CYP4F5 and CYP4F6. FASEB J 17: A1326, 2003.

218. Santos E and Roman RJ. Contribution of CYP450 metabolites of arachidonic acid in pressure natriuresis. FASEB J 17: A94, 2003.

219. Maier KG and Roman RJ. Superoxide regulation of the production and actions of 20-HETE in the kidney. FASEB J 17: A490, 2003.

220. Mattson DL, Kunert MP, Kaldunski ML, Roman RJ, Cowley AW Jr. Parental and developmental influence of purified or grain-based diets on hypertension and renal disease in Dahl salt-sensitive rats. FASEB J 17: A932, 2003.

221. Mattson DL, Kunert MP, Roman RJ and Cowley AW Jr. Chromosomal substitution reveals genes of hypertension on chromosomes 6, 18 and 20 of the Dahl salt-sensitive rat. Hypertension 42: 39, 2003.

222. Wang J, Maier KG, Roman RJ, de la Cruz L, Zhu J, Henderson L, Lombard JH. Expression of cytochrome P4504A isofoms in the cremaster muscle microcirculation of Sprague-Dawley rats. FASEB J 17: A548, 2003

223. Cowley AW Jr, Mattson DL, Kaldunski ML, Skelton MM, Roman RJ, Kunert MP, Jacob HJ. Effect of autosomal chromosomes upon sex-specific expression of renal and cardiovascular phenotypes demonstrated by chromosomal substitution in rats. Hypertension 42: 90, 2003.

224. McCarthy ET, Sharma R, Roman RJ, and Sharma M. 20-hydroxyeicosatetraenoic acid (20-HETE) protects glomerular protein permeability barrier from focal segmental glomerulosclerosis factor. JASN 14: 84A, 2003.

225. Miyata N, Seki T, Taniguchi K, Doi M, Tanaka M, Okuyama S, Roman RJ and Harder DR.20-HETE synthesizing enzyme inhibitor, TS-011 blocks acute fall in cerebral blood flow after subarachnoid hemorrhage in the rat. Neuroscience 00:000, 2003.

226. Miyata N, Seki T, Taniguchi K, Doi M, Omura T, Bando K, Mano Y, Kametani S, Ishii T, Amada H, Kobayashi-Matsunaga Y,Sato M, Tanaka M, Okuyama S, Cambj-Sapunar L, Harder DR and Roman RJ. Effect of TS-011, an inhibitor of the synthesis of 20-HETE, on cerebral blood flow after subarachnoid hemorrhage in rats. J Pharm J 00:000, 2003.

227. Tanaka Y, Omura T, Miyata N, Kitano K, Koizumi C, Fukasawa M, Endo H, Hachiuma K, Minagawa T, Susumu T, Yoshida S, Okuyama S, Nakaike S, Harder DR and Roman RJ. Effect of TS-011, a 20-hydroxyeicosatetraenoic acid (20-HETE) synthesisizing enzyme inhibitor, on brain injury induced by middle cerebral artery occlusion. J Pharm J 00:000, 2004.

228. Lopez B, Sarkis N, Wenberg N, Santos E, and Roman RJ. Effects of cytochrome P450 inhibitors and a 20-HETE antagonist on renal function in rats. FASEB J 18:A1035, 2004.

229. Sarkis AG, Lopez B, and Roman RJ. Acute effect of cytochrome P450 inhibitors on pressure natriuresis. FASEB J 18:A1037, 2004.

230. Takeuchi K, Yu M, Bohman Q, Harder D, and Roman RJ. NO-20-HETE interaction in the fall in CBF following SAH in rats. FASEB J 18:A1009, 2004.

231. Takeuchi K, Yu M, and Roman RJ. Effects of a hemoglobin-based oxygen carrier, PEG modified human hemogloblin (MP4) on cerebral blood flow in rats. FASEB J 18:A1008, 2004.

232. Moreno C, Khampang P, SchippersD, Lazar J, Kaldunski ML, Green AS, Roman RJ, Kwitek AE, Jacob HJ and Cowley AW Jr. Renal expression and sequence comparison of cyclooxygenase 2 in salt-sensitive hypertension. FASEB J 18:A301, 2004.

233. Hacein-Bey L, Harder DR, Meier H, Lauer K and Roman RJ. Improvement in angiographic vasospasm with a 20-HETE enzyme inhibitor in a subarachnoid hemorrhage dog model. ASNR 00:000, 2004.

234. Hacien-Bey L., Roman RJ, Lemke DM, Lauer K, Varelas P, Torbey MT, Cusick JF and Harder DR. Evaluation of 20-hydroxyeicosatetraenoic acid (20-HETE) levels in normal and abnormal blood and CSF. ASNR 00:000, 2004.

235. Ito O, Mori T, Kohzuki M, Ito S, Sarkis A, Cowley AW Jr and Roman RJ. Altered P-450 metabolism of arachidonic acid in the kidney of diabetes insipidus rats. Hypertension 44:539, 2004

236. Lopez B, Ryan RP, Moreno C, Lazar H, Jacob HJ, Proovost AP and Roman RJ. Indentification of a QTL on chromosome 1 for impaired autoregulation of RBF in Fawn-Hooded Hypertensive rats. Hypertension 44:510, 2004.

237. Dahly-Vernon AJ, Sharma M, McCarthyt ET, Savin VJ and Roman RJ. Transforming growth factor beta and glomerular protective actions of 20-hydroxyeicosatetraenoic acid agonist. Hypertension 44:548, 2004.

238. Vera T, Taylor M, Roman RJ and Stec D. Induction of renal 20-hydroxyeicosatetraenoic acid prevents angiotensin II (Ang-II) dependent hypertension in mice. Hypertension 44:555, 2004.

239. Schlick NE, Nobrega MA, Ryan RP, Roman RJ and Jacob HJ. The role of Rf-1 in the diabetic nephropathy of T2DN rat. J Am Soc Nephrol 15: 725A, 2004.

240. Garcia GE, Li P, Wu Y, Xie X, Wu W, Truong LD, Roman R, Johnson RJ, Krahl S, and Feng L. Neural inhibition of glomerulonephritis via cholinergic anti-inflammatory pathway. J Am Soc Nephrol 15: 687A, 2004.

241. Dahly-Veron AJ, SharmaM, McCarthy ET, Savin VJ, Ledbetter S and Roman RJ. TGF-B mediates elevations in permeability to albumin in hypertension. J Am Soc Nephrol 15: 447A, 2004.

242. Lopez B, Hoagland K, Flash A, Sarkis A, Lazar J, Jacob HJ, Kwitek AE, Garrett MR, Rapp JP and Roman RJ. Effect of transfer of CYP4A region of chromosome 5 from Lewis rats on the Dahl S genetic background on pressure natriuresis and salt-induced hypertension. Hypertension 46:835, 2005.

243. Sarkis A, Lopez B, Hoagland KM, Moreno C, Fenoy J, Lazar J, Jacob HJ, Kwitek AE, Garrett MR, Rapp JP and Roman RJ. Transfer of the CYP4A region from Lewis rats into Dahl S genetic background reduces renal injury. Hypertension 46:836, 2005.

244. Stec D, Roman RJ and Rieder MJ. Non-synonymous polymorphism in African and European American in CYP4F2 leasd to a reduction in 20-HETE production. Hypertension 46:837, 2005.

245. Dahly-Vernon AJ, Ledbetter S, and Roman RJ. Renoprotective effects of blockade of TGF-b versus standard antihypertensive therapies. Hypertension 46:826, 2005.

246. Abe M, Kaldunski M, Liang, Roman RJ and Cowley AW Jr. Effect of sodium delivery on superoxide and nitric oxide in the medullary thick ascending limb. Hypertension 46:857, 2005.

247. Grim CE, Kotchen JM, Krishaswami S, Gaudet D, Hamet P, Kaldunski ML, Pausova Z, Roman RJ, Tremblay J, Cowley AW Jr. Ethnic differences in the relative contribution of aldosterone and renin to the risk of hypertension. Hypertension 46:864, 2005.

248. Dahly-Vernon AJ, Lacy S, O'Connor JA, Harrington RA, Latts J, Jacob HJ, Roman RJ. Treatment with Metalloproteinase Inhibitor XL784 Prevents Development of Diabetic Nephropathy in the T2DN Rat, a New Inbred Model of Type 2 Diabetes. J Am Soc Nephrol 17:79A, 2006.

249. Sorokin A, Huh J., Flasch A., Roman RJ. Inhibition of renal adenocarcinoma cell proliferation by inhibitors of 20-HETE synthesis and signaling. J Am Soc Nephrol 17:180A, 2006.

250. Dahly-Vernon AJ, Lacy S, O'Connor JA, Harrington YA, Latts J, Jacob H, Roman RJ. Treatment with Metalloproteinase Inhibitor XL 784 Prevents the Development of Glomerulosclerosis in Dahl SS Hypertensive Rat. J Am Soc Nephrol 17:609A, 2006

251. Williams JM, Sharma M, McCarthy ET, Roman RJ. 20-HETE inhibition disupts the glomerular protein permeability barrier. J Am Soc Nephrol 17:52A, 2006

252. Sharma M, Williams J, Reddy D, Falck J, Medhora M, Roman RJ, McCarthy E. Epoxyeicosatrienoic Acids (EETs) contribute to the preservation and protection of the glomerular filtration barrier, J Am Soc Nephrol 17:179A, 2006.

253. Zuiderweg R, Ashtari A, Kotchen T, Flasch A, Roman, R. Urinary excretion of 20-HETE in normotensive and hypertensive African Americans, J Am Soc Nephrol 17:831A, 2006

254. Taylor N, Maier K, Roman R, Cowley A. NOS uncoupling in the kidney of Dahl S Rats – Role of Dihydrobiopterin. Hypertension 48:E38, 2006

255. Williams J, Ryan R, Flasch A, Roman RJ. Preventing an Increase in RIHP Reduces Renal 20-HETE Levels and Inhibits Pressure Natriuresis. Hypertension 48:E45, 2006.

256. Xiaoguang L, Harder D., Roman R, Falck J, Koehler R. Interaction of nitric oxide and 20-HETE during cortical functions hyperemia, FASEB J 20:A730, 2006.

257. Dunn K, Flasch A, Harder D, Roman RJ. Eicosanoid profiling in cerebral vessels and brain of WKY, SHR, and SHR-SP rats. FASEB J 20:A731, 2006.

258. Moreno C, Kaldunski M, Wang T, Lazar J, Roman RJ, Greene A, Jacob HJ, Cowley AW. Existence of Multiple Blood Pressure loci on Rat Chromosome 13 of the Dahl S Hypertensive Rat. FASEB J 20:A407, 206.

259. Schlick N, Ryan R, Roman RJ, Jacob HJ Rf-1 Implicated in the nephropathy of the T2DN Rat, FASEB J 20:A407, 2006.

260. Michalkiewicz M, Michalkiewicz T, Slocum G, Singer O, Cowley A, Greene A, Jacob H, Kaldunski M, Roman RJ, Verma I. Efficient transgenic rat production of a lentiviral vector. FASEB J 20:A407, 2006.

261. Renic M, Flasch AK, Klaus JA, Miyata N, Koehler RC, Harder DR, Roman RJ. Protective effect of 20-HETE inhibition on infarct volume following temporary middle cerebral artery occulusion is not associated with changes in cerebral blood flow. FASEB J. 21: A1383, 2007.

262. Dunn KMJ, Roman RJ. Cerebral vascular cytochrome P-450 4A enzyme activity and expression are elevated in a genetic model of stroke. *FASEB J*, 21: A1383, 2007.

263. Park F, Sweeney WE, Jia G, Roman RJ, Avner ED. Contribution of cytochrome P450 metabolites to the abnormal proliferation of renal epithelial cells in a murine model of PKD. JASN 18:129A, 2007.

264. Nilakantan V, Maenpaa C, Jia G, Roman RJ, Park F.; 20-HETE mediated cytotoxicity in ischemic kidney epithelial cells. JASN 18L 389A, 2007.

265. Zuk A, McCabe D, Proctor J, Aevazelis C, Gershenovich M, Ledbetter S, Falck JR, Roman RJ. Efficacy of 20-HETE agonists in a rat model of acute kidney injury (AKI). JASN 18:646A, 2007.

266. Williams JM, Ryan RP, Flasch AK, Lazar J, Jacob HJ, and Roman RJ. The Role of CYP450 Metabolites of Arachidonic Acid During the Development of Glomerular Disease in the Fawn-Hooded Hypertensive Rat Proceeding of FASEB Summer Conference on Renal Hemodynamics July 2007.

267. Williams JM, Lazar J, Jacob HJ, Roman RJ**.** Antihypertensive effects of substitution of chromosome 5 from the Brown Norway onto the Dahl S genetic background is associated with upregulation of the renal formation of 20-HETE. Abstracts Council for High Blood Pressure Research Sept. p26. 2008.

268. Roman RJ, Willams 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. Abstracts Council for High Blood Pressure Research Sept, p40, 2008

269. Williams JM, Lazar J, Jacob HJ, Roman RJ. Temporal characterization of the development of hypertension-induced renal injury in FHH and FHH.1BN congenic strains. Abstracts Council for High Blood Pressure Research Sept. p27, 2008

270. Garrett M, Wiessner J, Roman R, Mandel N. Dissecting the genetic basis of calcium oxalate stone disease using chromosome substitution strains in the rat. J Am Soc Nephrol 19: 294A, 2008.

271. Tabatabai NM, Kamyshko I, Park F, Roman RJ. Role of CYP-450 mediated formation in cadmium-induced hypertension. Am Soc Nephrol 19:377A, 2008.

272. Regner KR, Zuk A, Van Why SC, Shames BD, Falck JR, Roman RJ. The 20-HETE analogue N-20-Hydroxy-5Z, 14Z- dienoylglycine , mitigates experimental renal ischemia-reperfusion injury and prevents post-ischemic fall in medullary blood flow. Am Soc Nephrol 19:400A, 2008.

273. Schreck S, Williams JM, Beard D, Sharma M, Roman RJ. Dilutional fluorescent method to measure glomerular albumin reflection coefficient (dσalb) in vitro. Faseb J 23:969.3, 2009.

274. Akbulut T, Regner KR, Roman RJ, Park F. Effects of 20-HETE analogues on intracellular signaling cascades in renal proximal tubular cells. FASEB J. 23:816.5, 2009.

Last 5 years UMC Citations 275-333

275. Williams JM, Schreck C, Roman RJ. Early implications of increased matrix metalloprotease-2 and transforming growth factor-beta in the early onset of renal injury in Fawn hooded hypertensive rats. Hypertension 54: E28, 2009.

276. Lu L, Li P, Yang C, Kurth K, Misale M, Skelton M, Moreno C, Greene AS, Jacob HJ, Roman RJ, Lazar J, Liang M, and Cowley AW, Jr. Dynamic utilization of biological pathways in protection against salt-sensitive hypertension. Hypertension 54: E30, 2009.

277. Akbulut T, Roman RJ, Park F, Regner KR. Effect of 20-HETE analogues on renal proximal tubular cell survival following experimental ischemia-reperfusion injury. JASN 20:333A, 2009.

278. Regner KR, Nilakantan V, Mortenson J, White SM, Roman RJ. Lifor preservation solution mitigates experimental renal-ischemia reperfusion injury. JASN 20:337A, 2009.

279. Tabatabai N, Kothinti R, Kamyshko I, Blodgett A, Petering D, Roman, RJ. SGLT3: A novel glucose stimulated sodium transporter in the kidney. JASN 20:337A, 2009.

280. Pavlov TS, Ilatovskaya D, Roman RJ, Staruschenko A. Effects of cytochrome P450 metabolites of arachidonic acid on epithelial sodium channel. FASEB J 24:611.3, 2010.

281. Beeehner K, Falck JR, Roman RJ, Lomwbard JH. Role of 20-hete in differential effects of a high salt diet on resistance artery function in Dahl salt-sensitive rats and SS-5BN consomic rats. FASEB J 24:976.6, 2010.

282. KR Regner, T Akbulut, F Park, RJ Roman 20-HETE mitigates experimental renal ischemia-perfusion injury. J Inves Med. 58: 670, 2010.

283. Raffai G, Wang J, Falck JR, Roman RJ, Lombard JH. Salt induced increase in 20-HETE production alters vascular function of mesenteric resistance arteries of Dahl Salt-sensitive rats. FASEB J 24:979.7, 2010.

284. Williams JM, Lazar J, Jacob HJ, Roman RJ. Involvement of 20-HETE in Salt-sensitive Hypertension. Abstracts Renal Hemodynamics Meeting, Saxton River, Vermont, June 2010.

285. Roman RJ, Liu R, Williams JM, Burke M, Lazar J, Jacob HJ. Genetic basis of alterations in renal hemodynamics and the pathogenesis of glomerular disease in FHH rats. Abstracts Renal Hemodynamics Meeting, Saxton River, Vermont, June 2010.

286. Fu Y, Roman RJ, Lu D, Zhu X, Liu R. High salt intake-induced TGF suppression is partially mediated by primary cilia on the macula densa. Hypertension 55: e159, 2010.

287. Marthaler B, White SM, Van Why SK, Garrett MR, Roman RJ, Regner KR. Increased renal CYP4A expression and 20-HETE production promotes resistance to renal ischemia-reperfusion injury in rats. JASN 21: 788A, 2010.

288. Pavlov TS, Ilatovskaya D, Roman RJ, Staruschenko A. Effects of CYP P450 metabolites of arachidonic acid on the epithelial sodium channel (ENaC). JASN 21, 259A, 2010.

289. Williams JM, Stelloh C, Regner KR, Roman RJ, Garrett MR. Genetic Variants in *Arhgef11* linked to Proteinuria, Renal Hemodynamic Parameters, and GFR in the Dahl Salt-Sensitive Rats JASN 21: 732A, 2010.

290. AM Guo, B Janic, J Sheng, JR Falck, RJ Roman The Cytochrome P450 4A/F-20-Hydroxyeicosatetraenoic Acid System: A Regulator of Endothelial Precursor Cells Derived from human umbilical cord blood. JPET 338:421, 2011

291. Burke M**,** Pabbidi MR, Williams JM, Liu R, Lazar J, Jacob HJ, Roman RJ. Genetic basis of altered myogenic response and renal injury in FHH rats. Faseb J 25: 665.7, 2011.

292. Roman RJ, Williams JM, Burke M, Juncos J, Renic M, Harder D. Genetic basis of impaired myogenic response and cerebral blood flow autoregulation FHH rats. Faseb J 25: 1024.22, 2011.

293. Fan F**,** Jacob HJ, Guertz A, Murphy S**,** Roman RJ. Generation of CYP4A1 transgenic rats using the *Sleeping Beauty* transposon system. Faseb J 25: 1099.2, 2011.

294. Zhang J, Williams JM, Roman RJ. Assessment of changes in glomerular permeability to albumin in rat models of glomerular disease. Faseb J 25: 839.8, 2011.

295. Williams JM, Wells A, Spires D. The progression of diabetes-induced renal injury in Dahl salt-sensitive rats. Faseb J 25: 664.7, 2011.

296. Pabbidi MR, Juncos J, Burke M, Farley JM[1], Harder DR, Roman RJ. Enhanced BK ($I_{K(ca)}$) Channel Activity contributes to lack of myogenic response in the cerebral circulation of Fawn Hooded Hypertensive (FHH) rats. Faseb J 25:1024.14, 2011.

297. Murphy S, Fan F, Jacob HJ, Guertz A, Baker R, Roman RJ. Upregulation of the renal production of 20-HETE opposes the development of hypertension in CYP4A1 transgenic Dahl S rats. Faseb J 25: 822.11, 2011.

298. Quinn CPM, Mattson DL, Guertz A, Dwinell M, Lazar J, Schilling R, Hoffman M, Roman RJ, Cowley AW Jr., Jacob HJ. Characterization of Nap5 KO rat for blood pressure and associated phenotypes. Faseb J 25: 661.15, 2011.

299. Moulana M, H. Zhang H, Yanes LL, Romero GG, Fan F, Purser CA, Baker R,R.J. Roman, J.F. Reckelhoff. 20-HETE and CYP 4A isoforms in a model of postmenopausal hypertension. Faseb J 25:822.14, 2011.

300. Alexanian AA, Miller B, Roman RJ, Sorokin A. 20-HETE producing enzymes are upregulated in human cancers. Faseb J 25;829.1, 2011.

301. Speed J, Arany M, Cockrell K, Purser C, Baker R, Roman RJ, Granger JP, FASEB J 25:1079.10, 2011.

302. Slaughter T, Gunter BW, Fan F, Huang C, Pannuti A, Baker RC, Falck JR, Miele L, Roman RJ, Duhe RJ.The response of breast cancer cell lines to HET0016 alone or in combination with other Cancer Research 71 (8 suppl) 2279, 2011.

303. Intapad S, Tull FL, Dasinger JH, Fan F, Roman, RJ, Ojeda NB, Alexander BT. 20-HETE contributes to hypersensitivity to acute angiotensin II in intraurterine growth restricted rats. Hypertension 58:E165, 2011.

304. Ge Y, Lu Y, Junco LA, Murphy SR, Liu R, Roman RJ. The role of 20-HETE in myogenic response of the afferent arteriole and tubuloglomerular feedback. Hypertension 58:e197, 2011.

305. Williams JM, Slaughter TS, Wells A, Rucker C, Spires D, Kyle PB and Roman RJ. Increased MMP-9 activity during the progression of renal injury in Type-2 Diabetic Nephropathy rats. FASEB J 26:199 (687.4), 2012.

306. Slaughter TS, Spires D, Rucker C, Wells A, Kyle PB, Roman RJ, Williams JM. The reduction of renal injury in diabetic Dahl salt-sensitive rats with insulin is associated with decreased MMP activity. FASEB J 26: 199, 2012.

307. Murphy, SR, Fan F, Baker R, Guertz A, Jacob H, Roman, RJ. Upregulation of renal medullary 20-HETE production opposes the development of hypertension in Sleeping Beauty Transposon CYP4A1 transgenic Dahl S rats. FASEB J 26: 1103.13, 2012.

308. Koehler RC, Yang Z-J, Carter EL, Kibler KK, Kwansa H, Roman RJ, Harder DR. Role of 20-Hete in neuronal signaling and contribution to neonatal hypoxic-ischemic encephalopathy. FASEB J 26: 711.4, 2012

309. Ge Y, Fan F, Murphy SR, Williams JM, Liu R, Falck J, Roman RJ. Deficiency in the Production of 20-HETE Contributes to Impaired Myogenic and TGF Responses in the Afferent Arteriole of Dahl S Rats. Hypertension, p40, 2012.

310. Ge Y, Juncos LA, Murphy SR, Liu R and Roman RJ. The role of 20-HETE in myogenic responses of the afferent arterioles and tubuloglomerular feedback. Hypertension 60: , 2012.

311. Williams JM, Slaughter T, Paige A, Chen CCA, Fan F, Guerts A, Jacob H and Roman RJ. The role of matrix metalloproteinase-2 during the development of hypertension-induced renal injury in Dahl salt-sensitive rats. Hypertension 60 A347, 2012.

312. Slaughter T, Paige A, Fan F, Kyle P, Geurts A, Jacob H, Roman RJ, and Williams JM. Involvement of matrix metalloproteinase-2 during the progression of renal disease in diabetic Dahl salt-sensitive rats. Hypertension 60 A55, 2012.

313. Chen CCA, Geurts A, Jacob H, Fan F and Roman RJ. Heterozygous TGFβ1 Zinc-Finger Knockout Dahl S Rats Reveal Protection Against High-Salt Induced Renal Injury**.** Hypertension 60 (Suppl 1) A6, 2012.

314. Pabbidi MR, Juncos J, Lazar J, Harder DR, Jacob HJ, Roman, RJ. Identification of a region of rat chromosome 1 that impairs the myogenic response and cerebral blood flow autoregulation in FHH rats. Hypertension 60 (suppl 1) A127, 2012.

315. Slaughter T, Page A, Rucker C, Kyle P, Kojima N, Garrett MR, Roman RJ, Williams JM. Temporal characterization of the development of diabetic induced renal disease in strains of GK rats. Hypertension 60 (suppl 1) A134, 2012.

316. Kojima N, Williams JM, Takahashi T, Miyata N, Roman RJ. Renoprotective effects of SGLT2 inhibitor, Luseoglifozin, on the progression of diabetic nephropathy in T2DN rats. Hypertension 60 (suppl 1) A134, 2012.

317. Driesbach A, Smith SV, Kyle P, Ramaiah M, Garrett MR, Amenuke M, Griswold ME, Roman, RJ. Urinary CYP eicosanoid excretion correlates with glomerular filtration in African-Americans with chronic kidney disease. Hypertension 60: A348, 2012.

318. Murphy S, Fan F, Baker R, Roman RJ. Upregulation of renal medullary 20-HETE formation oppose the development of hypertension in CYP4A1 transgenic Dahl S rats. FASEB J 27:1115.3, 2013.

319. Slaughter T, Kojima N, Roman RJ and Williams JM. Alterations in renal hemodynamics are associated with increased renal MMP-2 expression during the early phase of diabetic nephropathy. FASEB J, 27:A1183.2, 2013

320. Gillis, E., Mooney, J., Roman, R., Williams, J., and Sasser, J. Using the T2DN rat as a model to determine the therapeutic efficacy of Serelaxin (recombinant human relaxin-2) for Diabetic Nephropathy. FASEB J, 27:LB889, 2013.

321. Fan F, Ge Y, Murphy SR, Geurts AM, Jacob H and Roman RJ. CYP4A1 transgenic rats generated using Sleeping Beauty transposon system restores the impaired myogenic responses in the afferent arteriole of Dahl S rats. Hypertension.62:A39, 2013

322. Muroya Y, Fan F, Regner KR, Marthaler B, Falck JR, Garrett MR, Juncos L and Roman RJ. Protective Role of Endogenous 20-HETE in Renal Ischemia-Reperfusion Injury. Hypertension 62:A283, 2013

323. Moulana M, Roman RJ, Baker R, Reckelhoff JF. 20-HETE is Increased and EETs are Decreased in the Renal Vasculature of a Rat Model of Polycystic Ovary Syndrome. Hypertension 62:A250, 2013.

324. Fu Y, Lu Y, Juncos LA, Pollack JS, Wei J, Roman RJ, Cheng L and Liu R. Macula densa NOS1 protects agains acute kidney injury (AKI) mediated by primary cilia. FASEB J 27:910.8, 2013.

325. Patil C, Moulana M, Romero D, Roman RJ and Baker R, Reckelhoff JF. 20-HETE Contributes to the Hypertension in a Model of Postmenopausal Polycystic Ovary Syndrome. Hypertension 62:A251, 2013.

326. Gillis E, Mooney J, Roman RJ, Williams JM and Sasser JM. Using the T2DN rat as a model to determine therapeutic efficacy of Serelaxin (recombinant human relaxin-2) for diabetic nephropathy. FASEB J 27:A , 2013.

327. Pabbidi MR, Farley J, Gebremedhin D, Harder DR and Roman RJ. Enhanced Large Conductance Ca+2 -sensitive K+ Channels (Bk) Activity Impairs the Myogenic Response in the Cerebral Vasculature of Fawn Hooded Hypertensive (FHH) Rat. Hypertension.62:A485, 2013.

328. Tullos H, Pabbadi M, Renic M, Farley J, Harder D and Roman RJ. Cerebral autoregulation: The genetic bais of the myogenic response. Neurology 2013.

329. Driesbach AW, Smith SV, Kyle PBm Ramaiah M, Amenuke M, Garrett MR, Lirette ST, Griswold ME and Roman RJ. Abstract Nephrology and Therapeutic, 2 Int Conf 2013.

330. White T, Spires D, Roman R and Williams J. Effects of hyperglycemia and cyclic stretching on MMP-2 and TGFb in rat mesangial cells. FASEB J A689.8, 2014.

331. Ge Y, Murphy S, Fan F, Williams J, Falck J and Roman RJ. A deficiency in the formation of 20-HETE impairs the myogenic and TGF responses of the Af-art of Dahl salt-sensitive rats. FASEB J 28:A857.8, 2014.

332. Fan F, Pabbidi MR, Geurts AM, Jacob H and Roman RJ. Upregulation of CYP4A1 expression restores the impaired myogenic response and autoregulation of cerebral blood flow in Dahl salt-sensitive rats. Hypertension 63:A222, 2014.

333. Y Muroya, F Fan, H Jacob, A Geurts, R Roman. Protective Role of Endogenous 20-HETE in Renal Ischemia-Reperfusion Injury. Hypertension 63: A298, 2014

334. Fan F, Geurts AM, Pabbidi MR, Harder DR, Jacob H and Roman RJ. Zinc-finger nuclease knockout of dual-specificity protein phosphate-5 enhances myogenic response and autoregulation of cerebral blood flow in FHH.1BN rats. Hypertension 63:A223, 2014.

335. Murphy SR, Wu W, White TN, Williams JM and Roman RJ. Renoprotective effects of Empagliflozin in type 1 and type 2 models of diabetic nephropathy. Diabetes ; 2014.

336. Mark M, Vallon V, Hugo C, Roman RJ and Mayoux E. Albuminuria, the sentinel marker of renal failure is consistently decrease with Empagliflozin in several preclinical models of diabetic nephropathy. DIABETOLOGIA 57, S333-S334, 2014

337. Maranon RO, Patil C, Dalmasso C, Roman RJ and Reckelhoff JF. Role of cytochrome P4504A2 in mediating the elevated blood pressure in a rat model of polycystic ovary syndrome. Hypertension 64: A246, 2014

338. Ge Y, Fan F, Muroya Y, Wu W, Roman RJ. Impaired myogenic sresponse of the Af-Art contributes to chronic kidney disease in Milan normotensive rats. FASEB J 29 (Supplement 1):A811.17, 2015.

339. Warrington JP, Fan F, Murphy SR, Roman RJ, Drummond HA, Granger JP, Ryan MJ. Placental ischemia impairs cerebral blood flow autoregulation and increases blood brain barrier permeability in pregnant rats. FASEB J 29 (Suppl 1):A646.7, 2015.

340. CN Patil, C Dalmasso, RO Maranon, H Zhang, RJ Roman, JF Reckelhoff Role of 20-HETE in elevated blood pressure in hyperandrogenic female rats, a model of polycystic ovarian syndrome. Hypertension 66 (Suppl 1), AP040, 2015

341. F Fan, MR Pabbidi, Y Ge, RJ Roman Knockdown of gamma-adducin expression impairs the myogenic response of the cerebral and renal arterioles. Hypertension 66 (Suppl 1), AMP05, 2015.

342. Li XC, Soleimani M, Nguyen H, Li H, Roman RJ, Zhuo JL. Li XC, Soleimani M, Nguyen H, Li X, Roman RJ, Zhuo JL Conditional deletion of the Na/H exchanger 3 in the proximal tubule of the kidney promotes pressure natriuresis in mice. Hypertension 66 (Suppl 1), AP167, 2015

343. Warrington JP, Fan F, LaMarca BB, Dechend R, Wallukat G, Roman RJ. Agonistic autoantibodies to angiotensin II type 1 receptor contributes partly to placental ischemia-incuduced cerebrovascular agnormalities. Hypertension 66 (Suppl 1), A127, 2015

344. Fan F, Geurts AM, Pabbidi MR, Ge Y, Harder DR, Roman RJ. A K572Q mutation in gamma-adducin is responsible for the impaired myogenic response and autoregulation of renal and cerebral blood flow in FHH rats. Hypertension 66 (Suppl 1), AMP14. 2015

345. Ge Y, Fan F, Roman RJ. Imparied myogenic response of the Af-art contributes to the increased susceptibility to hypertension and diabetic induced reanl disease in Milan normotensive rats. Hypertension 66 (Suppl 1) A063, 2015.

346. Pabbidi MR, Roman R. Diminished K Channel Inhibition Impairs Serotonin-Mediated

Vasoconstriction in the Middle Cerebral Arteries From the Fawn Hooded Hypertensive Rat Arteriosclerosis, Thrombosis, and Vascular Biology 35 (Suppl 1), A616, 2015.

347. Roman RJ, Geurts AM, Lin R, Pabbidi MR, Gomez-Sanchez E, Rajkowska G, Harder DR**,** Fan F. Role of gamma-adducin in cerebral vascular disease Neuroscience 2015, 250.16/U10

348. Fan F, Lin R, Pabbidi MR, Gomez-Sanchez E, Roman RJ Role of 20-HETE in the development of hypertension-related cerebral vascular disease Neuroscience 2015, 250.16/U9

349. Hirata T, Fan F, Kojima N, Takahashi T, Miyata N and Roman RJ Knockout of Matrix Metalloproteinase 2 Attenuates the Progression of Renal Disease in Streptozotocin-Induced Diabetic Dahl Salt Sensitive Rats. ASN Kidney Week 2015, TH-PO344

350. Fan F, Wu W, Murphy S Alterations in 20-HETE production contribute to end organ damage in female Dahl S rats. Cardiovascular, Renal and Metabolic Diseases: Physiology and Gender, 2015, 7.3.

351. Fan F, Simino J, Auchus AP, Knopman DS, Boerwinkle E, Fornage M, Mosley TH and Roman RJ. Functional Variants in CYP4A11 and CYP4F2 are Associated with Cognitive Impairment and Related Dementia Endophenotypes in the Elderly. 16th International Winter Eicosanoid Conference, 2015, 3.15.

352. Fan F, Pabbidi MR, Lin R, Ge Y, Gomez-Sanchez E, RajkowskaG, MoulanaM, Gonzalez-Fernandez E, Sims J, Elliott MR, Paul IA, Auchus AP, Mosley TH, Harder DR and Roman RJ. Impaired myogenic response of MCA elevates transmission of pressure to penetrating arterioles and contributes to cerebral vascular disease in aging hypertensive FHH rats. FASEB J 30 (Suppl 1) 945.7, 2016.

353. Pabbidi MR, Ge Y, Roman RJ and Fan F. Role of gamma-adducin gene in cerebral vascular myogenic response. FASEB J 30 (Suppl 1) 945.7, 2016.

354. Fan F, Ge Y, Pabbidi MR and Roman RJ. Knockdown of Expression of Gamma-Adducin in the Renal Afferent Arteriole Enhances BK Channel Activity, 2016 Experimental Biology, San Diego.

355. Lv W, Yu H, Williams JM, Sims JD, Elliott MR, Ge Y, Wang Y, Roman RJ and Fan F. Cognitive impairment in aging type 2 diabetes mellitus. Diabetes 65(suppl 1) 479P, 2016.

356. Sims JD, Elliot MR, Roman RJ and Fan F. Impaired autoregulation of cerebral blood flow on cognitive decline in aging diabetes. Diabetes 65(suppl 1) 479P, 2016.

357. Lv W, Yu H, Sims J, Elliott MR, **Roman RJ** and Fan F**.** Cognitive Impairment in Aging Type 2 Diabetes Mellitus. 4th International Conference on Vascular Dementia, 2016, Valencia, Spain.

358. Wang S, Arteaga A, Sandlin DS, Zhu H, Guyton RR, Yu Y, Fan F, **Roman RJ**, Vetter D, Yee KT, Zhou W and Zhu H. Vestibular hair cell loss in type 2 diabetic T2N rats. J Soc Neuroscience, 2106

359. Lv W, Yu H, Wang S, Li L, Taylor C, Gomez-Sanchez E, Sims J, Elliott MR, Wang Y, Williams, JM, **Roman RJ** and Fan F. A new type 2 diabetic rat model that is associated with cognitive impairment in aging. HBPR 2016, P243. Orlando, FL.

360. Arteaga A, Sandlin DS, Wang S, Yu Y, Chen L, Huang J, Mustain W, Yee K, Vetter D, Fan F, **Roman RJ**, Zhou W, Zhu H. Diabetes-induced changes in auditory function in the T2DN rats. 2017, 40th ARO, Baltimore, MD.

361. Wang S, Yu H, Lv W, Li L, Mims PN, Maeda KJ, Wang Y, Rajkowska GK, Williams JM, Paul I, Simino J, Auchus AP, Mosley TH, Jacob H, **Roman RJ** and Fan F. Role of autoregulation of cerebral blood flow in diabetes-related Alzheimer-Like Cognitive Deficits. 2017 Experimental Biology, Chicago, IL.

362. Wang S, Fan F, Pabbiddi, MR, Li L, Mims PN, Zhang C and **Roman RJ**. Involvement of gamma-adducin in the regulation of cytoskeleton and membrane trafficking of the BK channel in rat cerebrovascular smooth muscle cells. 2017 Experimental Biology, Chicago, IL.

363. Fan F * (corresponding author), Murphy S, Ge Y, Mims PN, Maeda KJ, Williams JM and **Roman RJ**. Zinc-finger nuclease knockout of dual-specificity protein phosphatase-5 protects against DOCA-salt induced chronic renal injury. 2017 Experimental Biology, Chicago, IL.

364. Fan F, Wang S, Mims PN, Maeda KJ, Li L, Geurts AM and **Roman RJ**. Knockout of matrix metalloproteinase-9 rescues the development of cognitive impairments in hypertensive Dahl salt sensitive rats. 2017 Experimenntal Biology, Chicago, IL.