

CURRICULUM VITAE

Josephine P. Briggs, M.D.

Education:

Undergraduate:

1962-1966 Harvard-Radcliffe College. A.B. cum laude, Biology, June 1966

Medical:

1966-1970 Harvard Medical School. M.D., June 1970

Postgraduate:

1970-1973 Internal Medicine Residency, Mount Sinai School of Medicine, NYC.

1973-1974 Chief Resident, Department of Internal Medicine, Mount Sinai School of Medicine

1973-1975 Fellow in Clinical Nephrology, Mount Sinai School of Medicine

1976-1979 Research Fellow, Department of Physiology, Mentors: Fred Wright, Gerhard Giebisch, Yale School of Medicine, New Haven, CT.

1998 Harvard Kennedy School – Course for Senior Executives in Government

2003 University of Maryland, NIH Senior Leadership Training Course

Positions held:

Current Director, National Center for Complementary and Alternative Medicine, NIH

2006-2008 Senior Scientific Officer, Howard Hughes Medical Institute, Chevy Chase, Maryland

1997-2006 Director, Division of Kidney, Urologic and Hematologic Diseases, NIDDK, National Institutes of Health, Bethesda, Maryland

1993-1997 Professor, Division of Nephrology, Department of Internal Medicine, Professor, Department of Physiology, University of Michigan

1994-1997 Associate Chair for Research and Faculty Affairs, Department of Internal Medicine, University of Michigan

1993-1994 Associate Chair for Research, Department of Internal Medicine, University of Michigan

1988-1993 Associate Professor, Division of Nephrology, Department of Internal Medicine

Associate Professor, Department of Physiology, University of Michigan
1985-1988 Assistant Professor, Division of Nephrology, Department of Internal Medicine, University of Michigan, Ann Arbor, MI.

1983-1984 Visiting Assistant Professor, Department of Internal Medicine
University of Texas Health Science Center, Dallas, TX.

1979-1985 Research Scientist, Physiology Institute, University of Munich, Munich, Germany.

1975-1976 Assistant Dean of Students for the Clinical Years, Mount Sinai School of Medicine

Medical Certification and Licensure:

1971 License New York State (Number 109707)

- 1973 Certification, American Board of Internal Medicine, Board Eligible, Nephrology
- 1985 License Michigan (Number 049241)

Awards and Honors:

- 1979-81 Alexander von Humboldt Scientific Exchange Award
- 1983-88 Established Investigator, American Heart Association
- 1988 Volhard Prize of the German Nephrological Society
- 1988 Elected to American Society of Clinical Investigation
- 1991 Elected to Fellow, Council for High Blood Pressure Research
- 1998 Elected to American Association of Physicians
- 2000 NIH Director's Award, for leadership of the Trans-NIH Zebrafish committee
- 2002 Elected Fellow, American Association for the Advancement of Science
- 2006 NIH Director's Award, for leadership in development of Trans-NIH Type I Diabetes Strategic Plan
- 2009 NIH Plain Language Clear Communication Award for NCCAM Director's Messages

Professional Societies Memberships and Principal Activities:

- 1978-Present American Society of Nephrology
1994-1997, ASN Councilor and Secretary Treasurer
- 1982-Present International Society of Nephrology
2002- present – ISN Councilor
2006-8 Chair Nominating Committee
- 1986-Present American Heart Association
Council on the Kidney in Cardiovascular Disease
Fellow of the Council on High Blood Pressure
- 1988-Present American Society of Clinical Investigation 1
1989-92 ASCI Councilor
- 1986-Present Women in Nephrology (1993-1994 WIN President)
- 1993-Present American Physiological Society, Member
- 1993-Present Accreditation Council for Graduate Medical Education
- 1996-Present American Association for the Advancement of Science (AAAS)
1996-2000 Medicine Section Steering Group, Member-at-large,
2001 Elected Fellow AAAS
- 1998 American Association of Physicians, elected member

Editorial Boards:

- 1993-Present Seminars in Nephrology
- 1993-2008 International Yearbook of Nephrology Dialysis Transplantation
- 1995-Present Kidney International
- 1995- Hypertension
- 1996- American Journal of Kidney Diseases
- 1995-1998, 2002-2008
American Journal of Physiology: Renal, Fluid and Electrolyte Physiology
- 1994-1997 Deputy Editor, Journal of Clinical Investigation
- 2000-2008 American Journal of Physiology, Regulatory

Clinical Activities – University of Michigan

1984-1997 General Medicine attending – one or two months per year
1984-1997 Nephrology Consult attending
1992-1997 Director-Diabetic Nephropathy Clinic

NIH Study Sections:

1992-1994 DRG General Medicine B, Regular Member
1994-1996 DRG General Medicine B, Chair

National Institutes of Health – Representative Trans NIH Activities

1997-2006 Chair- Interagency Coordinating Committee, Kidney Disease
1997-2000 Chair- Interagency Coordinating Committee, Urologic Disease
1998 Strategic Planning Coordination – National Kidney Disease Education Program Planning Meeting
2000-2004 Co-Chair Trans NIH Zebrafish Coordinating Committee
2000- 2004 Non-Mammalian Models Committee, Chair- Sharing and Intellectual Property Policy subcommittee
2004 Co-Chair Translational Core Resources Roadmap Committee
2004-2006 NIH-RAID Roadmap Pilot Program - Committee Chair
2009-present Member Scientific Management and Review Board
2009-present Member NIH Clinical Center, Advisory Board for Clinical Research
2009 Co-Chair, Search Committee, Director, NICHD

Consultantships:

1995 Life Sciences Panel, MERRA, Reviewer
1996 Parke-Davis, Consultant on renal toxicity in drug trials
1996 Searle, Consultant on phase II COX-2 inhibitor trials
1996 Biogen, Consultant on renal effects of drugs

Current Research Support:

Intramural NIDDK Research Laboratory – Co Investigator with Jurgen Schnermann
2010 budget: \$1,1045,000

Projects:

Molecular mechanisms of juxtaglomerular cell function and renin release
Role of Cyclooxygenase 2 in regulation of volume homeostasis
Circadian regulation of arterial pressure

Principal Grant Support 1992-1997

1. American Heart Association Established Investigator and Grant in Aid
2. NIH RO1 DK-40042 Role of EDRF in the Juxtaglomerular Apparatus, Principal Investigator
3. NIH RO1 DK 37488 Cellular function of the Juxtaglomerular apparatus, Co-Investigator
4. NIH P50 DK39255 Kidney and Urology Research Center: Glomerular and Tubular Injury, Project Director
5. NIH R01 DK40042 Macula Densa Control of Renin secretion, Principal Investigator

BIBLIOGRAPHY

Major Completed Publications:

Peer-Reviewed Publications:

1. Wright FS, Briggs JP. Feedback regulation of glomerular filtration. *Am J Physiol* 233:F1-F7, 1977.
2. Briggs JP, Levitt M, Abramson R. Renal excretion of allantoin in the rat: a clearance and micropuncture study. *Am J Physiol* 233:F373-F381, 1977.
3. Briggs JP, Wright FS. Feedback control of glomerular filtration rate: site of the effector mechanism. *Am J Physiol* 236:F40-F47, 1979.
4. Wright FS, Briggs JP. Feedback control of glomerular blood, pressure and filtration rate. *Physiol Rev* 59:958-1006, 1979.
5. Briggs JP, Schnermann J, Wright FS. Failure of tubule fluid osmolarity to affect feedback regulation of glomerular filtration. *Am J Physiol* 239:F427-F432, 1980.
6. Briggs JP. The macula densa sensor for tubuloglomerular feedback. *Fed Proc*: 40:99-103, 1981.
7. Schnermann J, Briggs JP. Participation of renal cortical prostaglandins in the regulation of glomerular filtration rate. *Kidney Int* 9:802-815, 1981.
8. Schnermann J, Briggs JP, Wright FS. Feedback-mediated reduction of glomerular filtration rate during infusion of hypertonic saline. *Kidney Int* 20:462-468, 1981.
9. Briggs JP, Schubert G, Schnermann J. Further evidence for an inverse relationship between macula densa NaCl concentration and filtration rate. *Pfluegers Arch* 391:372-378, 1982.
10. Schnermann J, Briggs JP, Schubert G. In situ studies of the distal convoluted tubule in the rat: Evidence for NaCl secretion. *Am J Physiol* 243:F160-F166, 1982.
11. Briggs JP, Steipe B, Schubert G, Schnermann J. Micropuncture studies of the renal effects of atrial natriuretic substance. *Pfluegers Arch* 395:271-276, 1982.
12. Briggs JP. A simple steady-state model for feedback control of glomerular filtration rate. *Kidney Int* 12:143-150, 1982.
13. Schnermann J, Briggs JP. Concentration-dependent NaCl transport as signal in feedback control of glomerular filtration rate. *Kidney Int* 12:82-89, 1982.
14. Schnermann J, Briggs JP, Weber PC. Tubuloglomerular feedback, prostaglandins and angiotensin in the autoregulation of glomerular filtration rate. *Kidney Int* 25:53-64, 1984.
15. Briggs JP. Effect of loop of Henle flow rate on glomerular capillary pressure. *Renal Physiol* 7:311-320, 1984.
16. Briggs JP, Marin-Grez M, Steipe B, Schubert G, Schnermann J. Inactivation of atrial natriuretic substance by kallikrein. *Am J Physiol* 247:F480-F484, 1984.
17. Briggs JP, Schubert G, Schnermann J. Quantitative characterization of the tubuloglomerular feedback response: effects of growth. *Am J Physiol* 247:808-817, 1984.
18. Schnermann J, Briggs JP, Schubert G, Marin-Grez M. Opposing effects of captopril and aprotinin on tubuloglomerular feedback responses. *Am J Physiol* 247:912-918, 1984.
19. Marin-Grez M, Briggs JP, Schubert G, Schnermann J. Dopamine receptor antagonists inhibit the natriuretic response to atrial natriuretic peptides. *Life Sciences* 36:2171-2176, 1985.
20. Schnermann J, Schubert G, Briggs JP. Comparison of tubuloglomerular feedback responses produced by native and artificial tubular fluid. *Am J Physiol* 250:F16-F21, 1986.
21. Schnermann J, Gokel M, Weber PC, Schubert G, Briggs JP. Maintained tubuloglomerular feedback and glomerular integrity in the non-clipped kidney of Goldblatt hypertensive rats on a low protein diet. *Kidney Int* 29:520-529, 1986.
22. Schnermann J, Briggs JP. Role of the renin-angiotensin system in tubuloglomerular feedback. *Fed Proc* 45:1426-1430, 1986.
23. Briggs JP, Schnermann J. Macula densa control of renin secretion and glomerular vascular tone: Evidence for common cellular mechanisms. *Renal Physiol* 9:193-203, 1986.
24. Schnermann J, Marin-Grez M, Briggs JP. Filtration pressure response to infusion of atrial natriuretic peptide. *Pfluegers Arch* 406:237-239, 1986.

25. Briggs JP, Schnermann J. The tubuloglomerular feedback mechanism: Functional and biochemical aspects. *Ann Rev Physiol* 49:251-273, 1986.
26. Davis CL, Briggs JP. Effect of reduction in renal artery pressure on atrial natriuretic peptide-induced natriuresis. *Am J Physiol* 252:F146-F153, 1987.
27. Schnermann J, Steipe B, Briggs JP. In situ studies of the distal convoluted tubule. II K secretion. *Am J Physiol* 252:F970-F976, 1987.
28. Skott O, Briggs JP. Direct demonstration of macula densa mediated renin secretion. *Science* 237:1618-1620, 1987.
29. Davis CL, Briggs JP. Effect of atrial natriuretic peptides on medullary solute gradients. *Am J Physiol* 253:F679-F684, 1987.
30. Skott O, Briggs JP. A method for superfusion of the isolated perfused tubule. *Kidney Int* 33:1009-1012, 1988.
31. Sterzel RB, Luft FC, Gao Y, Schnermann J, Briggs JP, Ganten D, Waldherr R, Schnabel E, Kriz W. Renal disease and the development of hypertension in salt-sensitive Dahl rats. *Kidney Int* 33:1119-1129, 1988.
32. Soejima H, Grekin RJ, Briggs JP, Schnermann J. Renal response of anesthetized rats to low dose infusion of atrial natriuretic peptide. *Am J Physiol* 255:R449-R455, 1988.
33. Schnermann J, Briggs JP. Interaction between loop of Henle flow and arterial pressure as determinants of glomerular pressure. *Am J Physiol* 256:F421-F429, 1989.
34. Schnermann J, Briggs JP. Single nephron comparison of effect of loop of Henle flow on filtration rate and pressure in control and angiotensin II infused rats. *Mineral Elect Metab.* 15:103-107. 1989.
35. Schnermann J, Todd KM, Briggs JP. Effect of dopamine on the tubuloglomerular feedback mechanism. *Am J Physiol* 258:F790-F798, 1990
36. Schnermann J, Weihprecht H, Briggs JP. Inhibition of tubuloglomerular feedback during adenosine₁-receptor blockade. *Am J Physiol* 258:F553-F561, 1990.
37. Briggs JP, Skott O, Schnermann J. Cellular mechanisms within the juxtaglomerular apparatus. *J Hypertension* 3:76-80, 1990.
38. Weihprecht H, Lorenz JN, Schnermann J, Skott O, Briggs JP. Effect of adenosine₁ receptor blockade on renin release from rabbit isolated perfused juxtaglomerular apparatus. *J Clin Invest* 85:1622-1628, 1990.
39. Lorenz JN, Weihprecht H, Schnermann J, Skott O, Briggs JP. Characterization of the macula densa stimulus for renin secretion. *Am J Physiol* 259:F186-F193, 1990.
40. Schnermann J, Briggs JP. Effect of angiotensin and other pressor agents on tubuloglomerular feedback responses. *Kidney Int* 38(Suppl. 30):S77-S80, 1990.
41. Schnermann J, Briggs JP. Restoration of tubuloglomerular feedback in volume expanded rats by angiotensin II. *Am J Physiol* 259:F565-72, 1990.
42. Skott O, Briggs JP, Lorenz JN, Weihprecht H. On the intrarenal regulation of renin release from the juxtaglomerular apparatus. *Kidney Int* 38:S38-42, 1991.
43. Briggs JP, Lorenz JN, Weihprecht H, Schnermann, J. Macula densa control of renin secretion. *Renal Physiol Biochem* 14:164-174, 1991.
44. Lorenz JN, Weihprecht H, Schnermann J, Skott O, Briggs JP. Renin release from isolated juxtaglomerular apparatus depends on macula densa chloride transport. *Am J Physiol* 260:F486-F493, 1991.
45. Sawaya BP, Weihprecht H, Campbell WR, Lorenz JN, Webb RC, Briggs JP, Schnermann J. Direct vasoconstriction as a possible cause for amphotericin B induced nephrotoxicity in rats. *J Clin Invest* 87:2097-2107, 1991.
46. Trivedi BK, Briggs JP, Killen PD. Application of polymerase chain reaction techniques to study of rabbit renin gene expression. *Kidney Int* 39:S23-S27, 1991.
47. Schnermann, J, Weihprecht H, Lorenz JN, Briggs JP. The afferent arteriole - the target for macula densa-generated signals. *Kidney Int* 39:S74-S77, 1991.
48. Weihprecht H, Lorenz JN, Briggs JP, Schnermann J. Vasoconstrictor effect of angiotensin II and vasopressin on isolated rabbit afferent arterioles. *Am J Physiol* 261:F273-F282, 1991.
49. Lorenz JN, Briggs, JP, Schnermann J, Brosius FC, Furspan PB. Intracellular ATP can regulate afferent arteriolar tone via ATP-sensitive K⁺ channels in the rabbit. *J Clin Invest* 90:733-740, 1992.

50. Brosius FC, Briggs JP, Marcus RG, Barac-Nieto M, Charron MJ. Expression of the insulin-responsive glucose transporter (GLUT4) in renal microvessels and glomeruli. *Kidney Int* 42:1086-1092, 1992.
51. Schnermann J, Lorenz JN, Briggs JP, Keiser JA. Induction of water diuresis by endothelin in rats. *Am J Physiol* 263:F516-F526, 1992.
52. Weihprecht H, Lorenz JN, Briggs JP, Schnermann J. Vasomotor effects of purinergic agonists in isolated rabbit afferent arterioles. *Am J Physiol* 263:F1026-F1033, 1992
53. Chen M, Schnermann J, Malvin RL, Killen PD, Briggs JP. Time course of stimulation of renal renin messenger RNA by Furosemide. *Hypertension* 21:36-41, 1993.
54. Todd-Turla K, Killen PD, Schnermann J, Briggs JP. Distribution of glucocorticoid and mineralocorticoid receptor mRNA along the renal nephron. *Am J Physiol* 264:F781-791, 1993.
55. Lorenz J, Weihprecht H, He X, Skott O, Briggs JP, Schnermann J. Effects of adenosine and angiotensin on macula densa-stimulated renin secretion. *Am J Physiol* 265 (Renal Fluid Electrolyte Physiol. 34): F187-F194, 1993.
56. Greenberg S, Lorenz J, He X, Schnermann J, Briggs JP. Effects of prostaglandin synthesis inhibition on macula densa-stimulated renin secretion. *Am J Physiol* 265 (Renal Fluid Electrolyte Physiol. 34): F578-F583, 1993.
57. Chen M, Todd-Turla K, Wang W-H, Cao X, Smart A, Brosius FC, Killen PD, Keiser JA, Briggs JP, Schnermann J. Endothelin-1 mRNA in glomerular and epithelial cells of kidney. *Am J Physiol* 265 (Renal Fluid Electrolyte Physiol. 34): F542-F550, 1993.
58. Chen M, Briggs JP. Cyclic AMP selectively increases renin mRNA stability in cultured juxtaglomerular granular (JGC) cells. *J Biol Chem* 268: 24138-24144, 1993.
59. Weihprecht H, Lorenz JN, Briggs JP, Schnermann J. Synergistic effects of angiotensin and adenosine in the renal microvasculature. *Am J Physiol* 266 (Renal Fluid Electrolyte Physiol. 35): F227-F239, 1994.
60. Chen M, Harris MP, Rose D, Smart A, He X-R, Kretzler M, Briggs JP, Schnermann J. Renin and renin mRNA in proximal tubules of the rat kidney. *J Clin Invest* 94:237-243, 1994.
61. Marcus R, England R, Nguyen K, Charron M, Briggs J, Brosius F. Altered renal expression of the insulin-responsive glucose transporter glut4 in experimental diabetes mellitus. *Am J Physiol* 267:F816-F824, 1994.
62. Greenberg SG, He X-R, Schnermann J, Briggs JP. Effect of nitric oxide on renin secretion: studies in isolated juxtaglomerular granular cells. *Am J Physiol* 268:F948-F952, 1995.
63. He X-R, Greenberg SG, Briggs JP, Schnermann J. Effect of nitric oxide on renin secretion: studies in the perfused juxtaglomerular apparatus. *Am J Physiol* 268:F953-F959, 1995.
64. He X-R, Greenberg SG, Briggs JP, Schnermann J. Effect of furosemide and verapamil on sodium chloride dependency of macula densa mediated renin secretion. *Hypertension* 26:137-142, 1995.
65. Sawaya P, Briggs JP, Schnermann J. Amphotericin B nephrotoxicity: the adverse consequences of altered membrane properties. *J Am Soc Nephrol* 6:154-164, 1995.
66. Fischer E, Schnermann J, Briggs JP, Kirz W, Ronco P, Bachman S. Ontogeny of NO synthase and renin in the juxtaglomerular apparatus of rat kidney. *Am J Physiol* 268:F1164-F1176, 1995.
67. Brosius FC, Nguyen K, Stuart-Tilley AK, Haller C, Briggs JP, Alper SL. Regional and segmental localization of AE2 anion exchanger mRNA and protein in rat kidney. *Am J Physiol* 269:F461-468, 1995.
68. Singh I, Grams M, Wang W-H, Yang T, Killen P, Smart A, Schnermann J, Briggs J. Coordinate regulation of renal expression of nitric oxide synthase, renin, and angiotensinogen mRNA by dietary salt. *Am J Physiol* 270:F1027-F1037, 1996.
69. Yang T, Hassan SA, Singh I, Smart A, Brosius FC, Holzman LB, Schnermann JB, Briggs, JP. SA Gene expression in the proximal tubule of normotensive and hypertensive rats, *Hypertension* 27:541-545, 1996.
70. Kretzler M, Fan G, Rose D, Arend L, Briggs JP, Holzman LB. Novel mouse embryonic renal marker gene products differentially expressed during kidney development. *Am J Physiol* 271:F770-7, 1996.
71. Bloembergen WE, Port FK, Mauger EA, et al. Gender discrepancies in living related renal transplant donors and recipients. *J Am Soc Nephrol* 7, 1139-44, 1996.

72. Yang T, Huang YG, Singh I, Schnermann J, Briggs JP. Localization of bumetanide- and thiazide-sensitive Na-(K)-Cl Cotransporters along the rat nephron. *Am J Physiol* 271:F931-F939, 1996.
73. Todd-Turla K, Zhu X-L, Shu X, Chen M, Yu T, Smart A, Killen PD, Fejes-Toth G, Briggs JP, Schnermann J. Synthesis and secretion of endothelin in a cortical collecting duct cell line. *Am J Physiol* 271:F330-F339, 1996.
74. Schnermann J, Zhu X-L, Shu X, Yang T, Huang YG, Kretzler M and Briggs JP. Regulation of endothelin production and secretion in cultured collecting duct cells by endogenous transforming growth factor- β . *Endocrinology* 137(11):5000-5008, 1996.
75. Yang T, Huang YG, Singh I, Schnermann, Briggs JP. Localization of bumetanide- and thiazide-sensitive Na-(K)-Cl cotransporters along the rat nephron. *Am J Physiol* 271: F931-F939, 1996
76. Valentini RP, Brookhiser WT, Park J, Yang T, Briggs JP, Dressler G, and Holzman LB. Post-translational processing and renal expression of Mouse Indian hedgehog. *J Biol Chem* 272:1-8, 1997.
77. Park, JM, T. Yang, Arend, LJ, Smart, AM, Schnermann, JB, Briggs, JP. Cyclooxygenase-2 is expressed in bladder during fetal development and stimulated by outlet obstruction. *Am J Physiol* 283:F538-F544, 1997.
78. Yang T, Hassan S, Huang Y-G, Smart A, Briggs JP and Schnermann JB. Expression of PTHrP, PTH/PTHrP receptor and Ca²⁺ sensing receptor along the rat nephron. *Amer J Physiol* 273:F315-F320, 1997.
79. Traynor T, Yang T, Huang YG, Arend L, Oliverio MI, Coffman T, Briggs JP, Schnemmann J. Inhibition of adenosine-1 receptor-mediated preglomerular vasoconstriction in AT1A receptor-deficient mice. *Am J Physiol* 275:F922-7, 1998.
80. Leavey SF, Arend LJ, Dare H, Dressler GR, Briggs JP, Margolis BL. Expression of Grb7 growth factor receptor signaling protein in kidney development and in adult kidney. *Am J Physiol* 275:F770-6, 1998.
81. Yang T, Singh I, Pham H, Sun D, Smart A, Schnermann JB, Briggs JP. Regulation of cyclooxygenase expression in the kidney by dietary salt intake. *Am J Physiol* 274:F481-9, 1998.
82. Arend LJ, Smart A, Briggs JP. Metanephric rat-mouse chimeras to study cell lineage of the nephron. *Developmental Genetics* 24:230-240, 1999.
83. Park JM, Yang T, Arend LJ, Schnermann JB, Peters CA, Freeman MR, Briggs, JP. Obstruction stimulates COX-2 expression in bladder smooth muscle cells via increased mechanical stretch. *Am J Physiol* 276:F129-F136, 1999.
84. Traynor, T, Yang, T, Huang, YG, Kregge, JH, Briggs, JP, Smithies, O, Schnermann, J. Tubuloglomerular feedback in ACE-deficient mice. *Am J Physiol* 276L751-F757, 1999.
85. Yang, T, Schnermann, JB, Briggs, JP. Regulation of cyclooxygenase-2 expression in renal medulla by tonicity in vivo and in vitro. *Am J Physiol* 277:F1-F9, 1999.
86. Yang, T, Sun, D., Huang, YG, Smart, A, Briggs, JP, Schnermann, J. Differential regulation of COX-2 expression in the kidney by lipopolysaccharide: role of CD14. *Am J Physiol* 277:F10-F16, 1999.
87. Traynor, TR, Smart, A, Briggs, JB, Schnermann, J. Inhibition of macula densa-stimulated renin secretion by pharmacological blockade of cyclooxygenase-2. *Am J Physiol* 277: F706-F710, 1999.
88. Yang, T, Michele, DE, Park, J, Smart, AM, Lin, Z., Brosius, FC, Schnermann, JB, Briggs, JP. Expression and function of peroxisomal proliferator activated receptors and retinoid x receptors in the kidney. *Am J Physiol* 277: F966-F973, 1999.
89. Schnermann, J., J.P. Briggs. The macula densa is worth its salt. A Commentary. *J Clin Invest* 104: 1007-1009, 1999.
90. Schnermann, J, Traynor, T, Pohl, H, Thomas, DW, Coffman, TM, Briggs, JP. Vasoconstrictor responses in thromboxane receptor knockout mice: tubuloglomerular feedback and ureteral obstruction. *Acta Physiol Scand* 168:201-207, 2000.
91. Schnermann, J., J.P. Briggs. The macula densa is worth its salt. A Commentary. *J Clin Invest* 104: 1007-1009, 1999.
92. Park, J.M., J.B. Schnermann, J.P. Briggs. Cyclooxygenase-2. A key regulator of bladder prostaglandin formation. *Adv Exp Biol Med* 462: 171-181, 1999.

93. Yang, T. Y., Huang, L. E. Heasley, T. Berl, J.B. Schnermann, J.P. Briggs. MAP Kinase mediation of hypertonicity-stimulated cyclooxygenase-2 expression in renal medullary collecting duct cells. *J Biol Chem* 275:23281-6, 2000.
94. Arend, L.J., Smart, A. M., Briggs, J.P. Mouse β_6 integrin sequence, pattern of expression, and role in kidney development. *J Am Soc Nephrol* 2297-2305, 2000.
95. Yang T, Park JM, Arend L, Huang Y, Topaloglu R, Pasumarthy A, Praetorius H, Spring K, Briggs JP, Schnermann J. Low chloride stimulation of prostaglandin E2 release and cyclooxygenase-2 expression in a mouse macula densa cell line. *J Biol Chem* 37922-9, 2000.
96. Yang T, Endo Y, Huang Y, Smart A, Briggs JP, Schnermann J. Renin expression in Cox-2 knockout mice on normal or low salt diets. *Am J Renal Physiol* 279: F819-25, 2000.
97. Agodoa LY and the AASK Investigators. Effect of ramipril versus amlodipine on renal outcomes in hypertensive nephrosclerosis: a randomized controlled trial. *JAMA* 285: 2719-28, 2001.
98. Vallon V, Traynor T, Barajas L, Huang YG, Briggs JP, Schnermann J. Feedback control of glomerular vascular tone in neuronal nitric oxide synthase knockout mice. *J Am Soc Nephrol* 12:1599-606, 2001.
99. Sun D, Samuelson LC, Yang T, Huang Y, Paliege, A, Saunders T, Briggs JP, Schnermann J. Mediation of tubuloglomerular feedback by adenosine: evidence from mice lacking adenosine 1 receptors. *Proc Nat Acad Sci USA*. 98, 9983-88, 2001.
100. Briggs JP. The zebrafish: a new model for regulatory physiology. *Am J Physiol Regulatory Integrative Comp Physiol* 282, R3-9, 2002.
101. Theilig F, Campean V, Paliege A, Breyer M, Briggs JP, Schnermann J, Bachman S. Epithelial COX-2 expression is not regulated by nitric oxide in rodent renal cortex. *Hypertension* 39: 848-53, 2002.
102. Yang T, Forrest SJ, Stine N, Endo Y, Pasumarthy A, Castrop H, Aller S, Forrest JN Jr, Schnermann J, Briggs J. Cyclooxygenase Cloning in Dogfish Shark, *Squalus Acanthias*, and its Role in Rectal Gland C1 Secretion. *Am J Physiol Regul Integr Comp Physiol*. 283(3):R631-7, 2002.
103. Hansen PB, Castrop H, Briggs J, Schnermann J. Adenosine Induces Vasoconstriction through Gi-Dependent activation of Phospholipase C in Isolated Perfused Afferent Arterioles of Mice. *J Am Soc Nephrol* 14(10):2457-65, 2003.
104. Hansen PB, Hashimoto S, Briggs J, Schnermann J. Attenuated Renovascular Constrictor Responses to Angiotensin II in Adenosine 1 Receptor Knockout Mice. *Am J Physiol Regul Integr Comp Physiol* 285(1):R44-9, 2003.
105. Rasooly RS, Henken D, Freeman N, Tompkins L, Badman D, Briggs J, Hewitt AT; National Institute of Health Trans-NIH Zebrafish Coordinating Committee. Genetic and genomic tools for the zebrafish research: the NIH Zebrafish Initiative. *Dev Dyn* 228(3): 490-6, 2003.
106. Castrop H, Schweda F, Mizel D, Huang Y, Briggs, J, Kurtz A, Schnermann J. Permissive Role of Nitric Oxide in Macula Densa Control of Renin Secretion. *Am J Physiol Renal Physiol* 286: F848-57, 2004.
107. Paliege A, Mizel D, Medina C, Pasumarthy A, Huang YG, Bachmann S, Briggs JP, Schnermann JB, Yang T. Inhibition of nNOS expression in the macula densa by COX-2 derived prostaglandin E2. *Am J Physiol Renal Physiol* 287: F152-9, 2004.
108. Briggs, JP. Evidence-based Medicine in the Dialysis Unit: A Few Lessons From the USRDS and the NCDS and HEMO trials. *Semin Dial* 17(2):136-41, April 2004
109. Francis ME, Eggers, PW, Hostetter TH, Briggs JP. Association between serum homocysteine and markers of impaired kidney function in adults in the United States. *Kidney Int* (1):303-12, July 2004.
110. Hansen, PB, Yang, T, Huang Y, Mizel D, Briggs, J, Schnermann J. Plasma renin in mice with one or two renin genes. *Acta Physiol Scand* 181(4):431-7, August 2004.
111. Hashimoto, S, Huang Y, Mizel, D, Briggs, J, Schnermann J. Compensation of proximal tubule malabsorption in AQP1-deficient mice without TGF-mediated reduction of CFR. *Acta Physiol Scand* 181(4): 455-62, August, 2004.
112. Coresh, J, Byrd-Holt, D, Astor, BC, Briggs, JP, Eggers, PW, Lacher, DA, Hostetter, TH. Chronic kidney disease awareness, prevalence, and trends among U.S. Adults, 1999 to 2000. *J Am Soc Nephrol* 16: Sep 2004.

113. Castrop, H, Huang, Y, Hashimoto, S, Mizel, D, Hansen, P, Theilig, F, Bachmann S, Deng, C, Briggs, J, Schnermann, J. Impairment of tubuloglomerular feedback regulation of GFR in ecto-5'-nucleotidase/CD73-deficient mice. *J Clin Invest* 114(5):634-42, Sep 2004.
114. Yang, T, Huang, YG, Ye W, Hansen P, Schnermann, JB, Briggs, JP. Influence of genetic background and gender on hypertension and renal failure in COX-2-deficient mice. *Am J Physiol Renal Physiol* 288(6):F1125-32, June 2005.
115. Yang, T, Zhang, A Honeggar, M, Kohan DE, Mizel, D, Sanders K, Hoidal JR, Briggs, JP, Schnermann, JB. Hypertonic induction of COX-2 in Collecting Duct Cells by Reactive Oxygen Species of Mitochondrial Origin. *J Biol Chem* 280(41): 34966-73, October 2005.
116. Castrop, H, Lorenz, JN, Hasen PB, Frilis U, Mizel, D, Oppermann, M, Jensen BL, Briggs, J, Skott, O, Schnermann, J. Contribution of the Basolateral Isoform of the Na-K-2Cl-Cotransporter (NKCC1/BSC2) to Renin Secretion. *Am J Physiol Renal Physiol* 289(6):F1186-92, Dec 2005.
117. Hansen PB, Hashimoto S, Oppermann M, Huang Y, Briggs JP, Schnermann J. Vasoconstrictor and vasodilator effects of adenosine in the mouse kidney due to preferential activation of A1 or A2 adenosine receptors. *J Pharmacol Exp Ther.* 2005 Dec;315(3):1150-7.
118. Hashimoto, S. Huang, Y, Briggs, J, Schnermann, J. Reduced Autoregulatory Effectiveness in Adenosine 1 Receptor-Deficient Mice. *Am J Physiol Renal Physiol* 2006 Apr;290(4):F888-91. Kim, SM, Mizel, D, Huang, YG, Briggs, JP, Schnermann, J. Adenosine as a Mediator of Macula Densa-Dependent Inhibition of Renin Secretion. *Am J Physiol Renal Physiol* 2006 May;290(5):F1016-23]
119. Oppermann M, Mizel D, Huang G, Li C, Deng C, Theilig F, Bachmann S, Briggs J, Schnermann J, Castrop H. Macula densa control of renin secretion and preglomerular resistance in mice with selective deletion of the B isoform of the Na,K,2Cl co-transporter. *J Am Soc Nephrol.* 2006 Aug;17(8):2143-52. Epub 2006 Jun 28. (Subject of Editorial Focus)
120. Castrop H, Oppermann M, Weiss Y, Huang Y, Mizel D, Lu H, Germain S, Schweda F, Theilig F, Bachmann S, Briggs J, Kurtz A, Schnermann J. Reporter gene recombination in juxtaglomerular granular and collecting duct cells by human renin promoter-Cre recombinase transgene. *Physiol Genomics.* 2006 Apr 13;25(2):277-85.
121. Oppermann M, Mizel D, Kim SM, Chen L, Faulhaber-Walter R, Huang Y, Li C, Deng C, Briggs J, Schnermann J, Castrop H. Renal function in mice with targeted disruption of the A isoform of the Na-K-2Cl co-transporter. *J Am Soc Nephrol.* 2007 Feb;18(2):440-8.
122. Kim SM, Chen L, Mizel D, Huang YG, Briggs JP, Schnermann J. Low plasma renin and reduced renin secretory responses to acute stimuli in conscious COX-2-deficient mice. *Am J Physiol Renal Physiol.* 2007 Jan;292(1):F415-22.
123. Chen L, Kim SM, Oppermann M, Faulhaber-Walter R, Huang Y, Mizel D, Chen M, Lopez ML, Weinstein LS, Gomez RA, Briggs JP, Schnermann J. Regulation of renin in mice with Cre recombinase-mediated deletion of G protein Gsalpha in juxtaglomerular cells. *Am J Physiol Renal Physiol.* 2007 Jan;292(1):F27-37. (subject of an editorial)
124. Briggs J. Commentary: Intensive BP Control in the non-hypertensive diabetic. *Nature Clinical Practice Nephrology*, 2007, June; 3, 304-305.
125. Kim SM, Chen L, Faulhaber-Walter R, Oppermann M, Huang Y, Mizel D, Briggs JP, Schnermann J. Regulation of renin secretion and expression in mice deficient in beta1- and beta2-adrenergic receptors. *Hypertension.* 2007 Jul;50 (1):103-9. Epub 2007 May 21. PMID: 17515456
126. Oppermann M, Hansen PB, Castrop H, Schnermann J. Vasodilatation of afferent arterioles and paradoxical increase of renal vascular resistance by furosemide in mice. *Am J Physiol Renal Physiol.* 2007 Jul; 293 (1) F279-87. Epub 2007 May 9.
127. Kim SM, Theilig F, Qin Y, Cai T, Mizel D, Faulhaber-Walter R, Hirai H, Bachmann S, Briggs JP, Notkins AL, Schnermann JB. Dense Core Vesicle Proteins IA-2 and IA-2 {beta} affect Renin Synthesis and Secretion through the {beta} – Adrenergic Pathway. *Am J Physiol Renal Physiol.* 2008 Nov 19.
128. Kim SM, Eisner C, Faulhaber-Walter R, Mizel D, Wall SM, Briggs JP, Schnermann J. Salt sensitivity of blood pressure in NKCC1-deficient mice. *Am J Renal Physiol.* 2008 Oct;295 (4): F1230-8.
129. Schnermann, J, Briggs JP. Tubuloglomerular feedback: mechanistic insights from gene-manipulated mice. *Kidney Int.* 2008 Aug;74 (4) :418-26.

130. Kim SM, Huang Y, Qin Y, Mizel D, Schnermann J, Briggs JP. Persistence of circadian variation in arterial blood pressure in beta1/beta2-adrenergic receptor-deficient mice. *Am J Physiol Regul Interg Comp Physiol.* 2008 May; 294 (5) :R1427-34.
131. Faulhaber-Walter R, Chen L, Oppermann M, Kim SM, Huang Y, Hiramatsu N, Mizel D, Kajiyama H, Zerfas P, Briggs JP, Kopp JB, Schnermann J. Lack of A1 adenosine receptors augments diabetic hyperfiltration and glomerular injury. *J Am Soc Nephrol.* 2008 Apr;19 (4) :722-30. Epub 2008 Feb 6.
132. Hansen PB, Friis UG, Uhrenholt TR, Briggs J, Schnermann J. Intracellular signalling pathways in the vasoconstrictor response of mouse afferent arterioles to adenosine. *Acta Physiol (Oxf).* 2007 Oct;191 (2):89-97.
133. Briggs JP. The hunt for the perfect biomarker for acute kidney injury: back to gamma trace? *Kidney Int.* 2008. 74, 987-988.
134. Kim SM, Theilig F, Qin Y, Cai T, Mizel D, Faulhaber-Walter R, Hirai H, Bachmann S, Briggs JP, Notkins AL, Schnermann J. Dense-core vesicle proteins IA-2 and IA-2{beta} affect renin synthesis and secretion through the {beta}-adrenergic pathway. *Am J Physiol Renal Physiol.* 2009 Feb;296(2):F382-9.
135. Chen L, Kim SM, Eisner C, Oppermann M, Huang Y, Mizel D, Li L, Chen M, Sequeira Lopez ML, Weinstein LS, Gomez RA, Schnermann J, Briggs JP. Stimulation of renin secretion by angiotensin II blockade is Galpha-dependent. *J Am Soc Nephrol.* 2010 Jun;21(6):986-92.
136. Eisner C, Faulhaber-Walter R, Wang Y, Leelahavanichkul A, Yuen PS, Mizel D, Star RA, Briggs JP, Levine M, Schnermann J. Major contribution of tubular secretion to creatinine clearance in mice. *Kidney Int.* 2010 Mar;77(6):519-26.

□Non-Peer Reviewed Publications:

1. Schnermann J, Briggs JP. Current topics and controversies in macula densa control of filtration. *Proc VIIIth Cong Int Soc Nephrol*, 140-146,1981.
2. Briggs JP, Schnermann J. The regulatory role of the tubuloglomerular feedback mechanism. *Proc IXth Int Cong Nephrol* 143-153, 1984.
3. Schnermann J, Briggs JP. Renal effects of the atrial natriuretic peptides. *Klin Wochensh* 65 VIII, 92-96, 1987.
4. Marin-Grez M, Angchanpen P, Gambaro G, Schnermann J, Schubert G, Briggs JP. Evidence for an involvement of dopamine receptors in the natriuretic response to atrial natriuretic peptide. *Klin. Wochensh.* 65 VIII, 97-102, 1987.
5. Briggs JP, Velazquez H, Schubert G, Marin-Grez M, Schnermann J. Inhibitory effect of atrial natriuretic peptides on chlorine absorption in loops of Henle perfused in vivo. In: Biologically Active Atrial Peptides, edited by B.M. Brenner and J.H. Laragh, Raven Press, New York, 410-412, 1987.
6. Briggs JP, Schnermann J. Vasopressin dissociates the responses of sodium and water excretion to atrial natriuretic factor in water-diuretic rats. In: Biologically Active Atrial Peptides, edited by B.M. Brenner and J.H. Laragh, Raven Press, New York, 428-431, 1987.
7. Briggs JP, Schnermann J, Skott O. Macula densa transport: direct and indirect approaches. Proc Fernstrom Symposium 79-88, 1988.
8. Skott O, Briggs JP. Macula densa control of renin secretion from the isolated perfused and superfused JGA, Poc Fernstrom Symposium, 229-238, 1988.
9. Briggs JP, Todd-Turla K, Schnermann J, Killen P. Approach to the molecular basis of nephron heterogeneity: Application of reverse transcription-polymerase chain reaction to dissected tubule segments. Sem in Nephrol 13: 1993.
10. Schnermann J, Briggs JP. Role of adenosine in cell-to-cell signalling in the juxtaglomerular apparatus. Sem in Nephrol 13:236-245, 1993.
11. Lorenz J, Greenberg S, Briggs JP. The macula densa for control of renin secretion. Sem in Nephrol 13:531-542, 1993.
12. Briggs JP. What does it take for bench research to succeed in departments of internal medicine? American Professors of Medicine Symposium, 1995.
13. Briggs JP, Schnermann J. Whys and wherefores of juxtaglomerular apparatus function. Kidney Int, 49:1724-6, 1996.

14. Park, J.M., J.B. Schnermann, J.P. Briggs. Cyclooxygenase-2. A key regulator of bladder prostaglandin formation. Adv. Exp. Biol. Med. 462: 171-181, 1999
15. Vallon, V., M. Chen, T. Yang, J. Briggs, J. Schnermann. Molecular and functional evidence for expression of adenosine receptors in zebrafish, *Danio Rerio*. Mount Desert Island Biological Laboratories Bulletin (in press)
16. Yang, T., Y. Endo, M. Chen, J. Schnermann, J. Briggs. Cyclooxygenase isoforms in zebrafish (*Danio Rerio*). Mount Desert Island Biological Laboratories Bulletin 1999
17. Yang, T., S. Forrest, N. Stine, Y. Endo, S. Aller, J. N. Forrest, Jr., J. Schnermann, J. Briggs. cDNA cloning of a cyclooxygenase gene and effects of cyclooxygenase inhibition on chloride secretion in the rectal gland of the dogfish shark, *Squalus Acanthias*. Mount Desert Island Biological Laboratories Bulletin (1999]
18. Chen, M., V. Vallon, A. Smart, Y. Endo, J. Schnermann, J. Briggs. Studies of the zebrafish (*Danio Rerio*) renin-angiotensin system. Mount Desert Island Biological Laboratories Bulletin (1999]
19. Endo, Y., M. Chen, V. Vallon, J. Schnermann, J. P. Briggs. Expression of cathepsin d and angiotensinogen in nephrons of zebrafish (*Danio Rerio*) kidney. Mount Desert Island Biological Laboratories Bulletin (2000)
20. Stoney CM, Coates P, Briggs JP. Integrity of active components of botanical products used in complementary and alternative medicine. *JAMA*. 2008 Nov 5;300(17):1995; author reply 1995-6.

Chapters in Books:

1. Briggs JP, Wright F. Identification in vivo of related surface vessels and tubules. Int. Symp. Vascular and Tubular Org of the Kidney. 49, 1978.
2. Schnermann J, Briggs JP, Kriz W, Moore L, Wright F. Control of glomerular vascular resistance by the tubuloglomerular feedback mechanism. In: Renal Pathophysiology, Recent Advances (edited by A Leaf, G Giebisch, L Bolis, S Gorini). Raven Press, New York, pp.165-182, 1980.
3. Weber PC, Siess W, Scherer B, Briggs JP, Schnermann J. Prostaglandins and the renal circulation. In: Prostaglandins and the Cardiovascular System. Raven Press, 1980.
4. Schnermann J, Briggs JP. The function of the juxtaglomerular apparatus: local control of glomerular hemodynamics. In: The Kidney: Physiology and Pathophysiology. (edited by G Giebisch and DW Seldin), Raven Press, New York, 1985.
5. Schnermann J, Briggs JP. The physiological importance of atrial natriuretic peptide. In: Functional Morphology of the Endocrine Heart (edited by W.G. Forssman et al.) Steinkopff Verlag Darmstadt, 1989.
6. Briggs JP, Schnermann J. The tubuloglomerular feedback mechanism. In: Hypertension: Pathophysiology, Diagnosis and Management. (edited by J. Laragh and B. Brenner), Raven Press, New York, 1990.
7. Briggs JP, Sawaya BP, Schnermann J. Disorders of sodium balance. In: Fluids and Electrolytes (edited by J. Kokko and R. Tannen), Little, Brown, Boston 1991.
8. Briggs JP. Introduction to body fluids. In: The Principles and Practice of Nephrology (edited by HR Jacobsen, GE Striker, S. Klanr), B.C. Decker, Toronto, 1991.
9. Schnermann J, Briggs JP. The function of the juxtaglomerular apparatus: local control of glomerular hemodynamics. In: The Kidney: Physiology and Pathophysiology, 2nd edition. (edited by G. Giebisch and D.W. Seldin), Raven Press, New York, 1992.
10. Briggs JP, Schnermann J. Overview of Renal Function. In: Primer on Kidney Diseases, (edited by A. Greenberg), The National Kidney Foundation, Academic Press, New York, 1994.
11. Briggs JP, Schnermann J. Control of renin release and glomerular vascular tone by the juxtaglomerular apparatus. In: Hypertension: Physiology, Diagnosis and Management, 2nd Ed. (edited by Laragh and Brenner), Raven Press, New York, 1994.
12. Briggs JP, Singh IJ, Sawaya BP, Schnermann J. Disorders of salt balance. In: Fluids and Electrolytes 3rd ed., (edited by J. Kokko and R. Tannen), Little, Brown, Boston 1995.
13. Briggs JP, Schnermann J. Role of nitric oxide in the function of the juxtaglomerular apparatus. In: Nitric oxide and the Kidney: Physiology and Pathophysiology, (edited by M. Goligorsky and S.S. Gross), Chapman and Hall, New York, 1996.

14. Briggs JP, Schnermann J. Overview of Renal Function. In: Primer on Kidney Diseases, 2nd Edition, (edited by A. Greenberg), The National Kidney Foundation, Academic Press, New York, 1998.
15. Schnermann, J., J.P. Briggs. The Function of the Juxtaglomerular Apparatus: Control of Glomerular Hemodynamics and Renin Secretion. In: The Kidney: Physiology and Pathophysiology, edited by D.W. Seldin and G. Giebisch (3rd Edition), Raven Press (2000).
16. Briggs JP, Schnermann J. Overview of Renal Function. In: Primer on Kidney Diseases, 3rd Edition, (edited by A. Greenberg), The National Kidney Foundation, Academic Press, New York, 2002.
17. Briggs JP, Schnermann J. Overview of Renal Function. In: Primer on Kidney Diseases, 4th Edition, (edited by A. Greenberg), The National Kidney Foundation, Academic Press, New York, 2005.
18. Briggs JP, Schnermann J. Overview of Renal Function. In: Primer on Kidney Diseases, 5th Edition, (edited by A. Greenberg), The National Kidney Foundation, Academic Press, New York, 2009.
19. Briggs, JP. Complementary, Alternative and Integrative Medicine. In ACP Medicine 2011, (edited by Betsey Nabel), American College of Physicians, B.C Decker, Philadelphia, (in press).