CURRICULUM VITAE

Karen A Munger, PhD

Sioux Falls VA Health Care System
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EDUCATION:

College:
Ft. Lewis College, Durango, CO. Biology: BS, 1983

Medical or Graduate School:
University of California, San Diego, CA
Physiology/Pharmacology Graduate Program: PhD, 1988
Renal and Vascular Physiology/Pharmacology

Post-Doctoral Training:
Dr. Harry Jacobson, Program Director
Dr. Kamal Badr, Mentor and Supervisor
Div. of Nephrology, School of Medicine
Vanderbilt University
July 1988 to August 1991

PROFESSIONAL AWARDS/HONORS:

MARC Undergraduate Fellowship, 1982-1983
Magna Cum Laude, Biology, 1983
MARC Predoctoral Fellowship, 1983-1988
NKF Young Investigator Award, 1989-1990
American Heart Association Grant-in-Aid, 1995
VA Medical Research Merit Review Award 2000-2003 ($147,000/year direct costs)
NIH, NIDDK RO-1 2003-2008 ($210,000/year direct costs)
BCAAP Award, SDSU, $35,000/year 2012-2014
SDSU/Avera Research Grant, $20,000 2012-2013
SDSU Research Grant, $45,000 2014

ACADEMIC AND PROFESSIONAL HISTORY:
CURRENT:

Chief, Research & Development
Sioux Falls VA Health Care System
April 2015 to present

Integrated Ethics Program Officer
Sioux Falls VA Health Care System
May 2015 to present

Great Plains Medical Research Foundation Board Member
Sioux Falls VA Health Care System
September 2005 to present

Associate Professor of Medicine
University of South Dakota Sanford School of Medicine,
September 2005 to present

PREVIOUS POSITIONS:
Research Physiologist, Veterinary Medical Unit Supervisor, Chemical Hygiene Officer, Safety Officer
Sioux Falls VA Health Care System
September 2005 to March 2015 (Continued as Coordinator R&D, see above)

Senior Research Scientist, Director of Basic and Applied Research
Avera Research Institute September 2005-March 2015
Director Applied Research (2009 - 2012)
Director Basic Research (2008 – 2013)
Sr. Research Scientist (2005 – 2015)

Assistant Professor of Medicine
Dr. Roland C. Blantz, Division Head,
University of California at San Diego
UCSD School of Medicine and San Diego VAMC
January 2000 to September 2005

Research Physiologist
San Diego VAMC
January 2000 to September 2005

Research Assistant Professor of Medicine
Dr. Kamal F. Badr, Chief of Renal Division at VAMC,
Dr. William Mitch, Director, Emory Renal Division
Emory University School of Medicine
January 1993 to December 1999

Research Physiologist
Atlanta VAMC
January 1993 to December 1999

Instructor of Pharmacology/ Instructor of Medicine
Dr. Edwin Jackson, Program Director
Center for Clinical Pharmacology, School of Medicine
University of Pittsburgh
September 1991 to January 1993

SOCIETY MEMBERSHIPS:
•American Society of Nephrology, since 1989
•American Physiological Society, since 1990

TEACHING EXPERIENCE:
1. Served on graduate thesis committees (5 students). University of South Dakota, 2008-present.
2. Awarded BRIN (Biomedical Research Infrastructure Network) summer students 2006-present. (12 students to date) Participated in BRIN conferences and workshops.
3. Trained Internal Medicine Residents for one month research rotations. (4 students 2007-2008).
4. Internal Medicine Resident Noon Conferences (2 per year), 2007-2011.
5. Clinical First Steps program to ~20 medical students, June, 2008.
6. Invited local lectures: University of South Dakota, Basic Biomedical Sciences (2004), Augustana Biology Department (2005), North Central Kidney Institute (2005), Cardiovascular Research Institute (2006, 2010), Black Hills State University (2012), SDSU Biochemistry (2012,-2014), USD Biomedical Engineering (2013).
7. Renal physiology lectures to undergraduate bioengineering students at University of California at San Diego (2000-2005).
8. Laboratory instructor for first year medical students and tutored and taught summer sessions for medical students at University of California at San Diego (1985-86).
9. Trained/supervised numerous undergraduate, graduate, and post-graduate students and technicians in renal physiology and surgery at University of California at San Diego, Vanderbilt University, University of Pittsburgh, Emory University, Augustana College and University of South Dakota (1985 to present).
10. Participated in and/or organized various seminar and journal club presentations. Organized departmental and laboratory retreats.

COMMITTEE ASSIGNMENTS:
1. Member of Sanford School of Medicine Admissions Committee, 2009-2012.
2. LCME subcommittee: Institutional Academic Research Environment 2008.

3. USD IACUC committee (2006-2009, 2014-2015).
4. Served on graduate thesis committees (5 students). University of South Dakota, 2008-present.
5. President of Great Plains Medical Research Foundation May 2008 to 2013. Treasurer/Secretary 2013-2014. Board member 2007-present.
6. Research and Development, Biosafety, and GEMS Committees, VAMC, Sioux Falls (2005 to present).
7. Service on Animal Care and Use Committees (IACUC). Chair, Atlanta VA IACUC. Served on committee 1994-1999. Also served on Emory University IACUC committee (1998-99) and on VA San Diego IACUC committee (2000-2005). Avera IACUC 2014-2015.
8. Reviewer for scientific journals including American Journal of Physiology, Journal of the American Society of Nephrology, Canadian Journal of Physiology and Pharmacology, Pediatric Nephrology, and Kidney International.

COMMUNITY SERVICE:

1. Member SDSU College of Pharmacy Advisory Board. 2011to present.
2. Graduate Women in Science (GWIS), South Dakota. Founding member and Officer: Awards and Science Spotlight. 2010 to 2012.
3. Kidney Walk, 2006-2008.
4. Volunteered at Lincoln High School for various events 2005-2010.
5. Volunteered at Washington Pavilion (for DAPA) 2007-2008.
6. Presented at Governor's Office of Economic Development Conference, Pierre, 2008.
7. Volunteered at "Wee Companions", a small animal shelter/rescue in San Diego (2001-2005).
8. Participated in "Science-By-Mail", a mentoring program for grade school children in Tennessee, 1990-1993.

RESEARCH PROJECTS: (see publications for full list)

- Role of bradykinin in stimulation of skeletal muscle afferent nerves: single nerve cell recordings.
- Sex-dependent difference in renal hemodynamics in rats.
- Cyclooxygenase dependent mediators of renal hemodyanamics in female rats.
- Renal response to glycine in aging rat kidneys.
- Maternal plasma volume expansion in pregnant rats.
- Rat kidney transplantation: effects of surgery and acute rejection on kidney function.
- Localization of p35 in rat kidneys recovering from ischemic injury.
- Mechanisms of endothelin-induced natriuresis in the rat.
- Renal hemodynamic responses to prostaglandins and other eicosanoids.
- Role of cytochrome P-450 arachidonic acid metabolites in response to uninephrectomy.
- Renal hemodynamic effect of atrial natriuretic factor and endothelin.
- Transfection of 15-lipoxygenase gene into rat kidneys.
- Role of 5-lipoxygenase in glomerulonephritis.
- Role of endothelin in renal hemodynamics.

- Role of leukotrienes in glomerular disease.
- Role of TGF-β and F2-isoprostanes in Type I diabetes.
- Counter regulation of polyamine pathways in the kidney.
- Antiproliferative effects of agmatine.
- Role of arginine in early sepsis
- Expression of NMDA receptors in rat kidneys: response to low protein diet.
- NMDA activated proximal reabsorption and renal oxygen consumption in renal tubules.
- Sex and age dependent differences in renal NMDA expression
- Effects of light-activated naphthalimides on collagen binding in rat arteries.
- Effects of light-activated naphthalimides on luminal gain, vessel compliance, and buckling in porcine arteries.
- Worked with a newly formed biotech company started from our Avera Applied Research group, "Alumend" (Formerly "Photobiomed"). Conducted preclinical physiology studies (2009-2015) as Lead of Physiology Unit.
- Contracting/consulting work to RenaLogics, (Aderis Therapeutics), another small biotech company started at Emory University by our laboratory. Conducted and supervised all animal experiments for the group and assisted in other managerial and discovery aspects of the business (1996-1999). Occasional contract work for other biotech companies since 1993.

PUBLICATIONS:

PEER REVIEWED PAPERS:

1. **Munger K**, Baylis C. Sex differences in renal hemodynamics in rats. Am J Physiol. 254 (Renal Fluid Electrolyte Physiol. 23): F223-F231, 1988.

2. **Munger KA**, Mitchell M, Baylis C. Differences between the sexes and the effects of surgery and anesthesia on the urinary excretion rate of eicosanoids in the rat. Prostaglandins. 37(3):379-388, 1989.

3. Badr KF, **Munger KA**, Sugiura M, Snajdar RM, Schwartzberg M, Inagami T. High and low affinity binding sites for endothelin on cultured rat glomerular mesangial cells. Biochem Biophys Res Comm 161(2):776-781, 1989.

4. **Munger KA**, Blantz RC. Cyclooxygenase-dependent mediators of renal hemodynamic function in female rats. Am J Physiol 258 (Renal Fluid Electrolyte Physiol. 27):F1211-F1217, 1990.

5. Tucker BJ, Peterson OW, **Munger KA**, Bird JE, Mitchell M, Pelayo JC, Blantz RC. Glomerular hemodynamic alterations during renal nerve stimulation in rats on high- and low-salt diets. Am J. Physiol. 258 (Renal Fluid Electrolyte Physiol. 27):F133-F143, 1990.

6. Baylis C, Fredericks M, Wilson C, **Munger K**, Collins R. Renal vasodilatory response to intravenous glycine in the aging rat kidney. Am J Kidney Dis. 15(3):244-251, 1990.

7. Harris RC, **Munger KA**, Badr KF, Takahashi K. Mediation of renal vascular effects of epidermal growth factor by arachidonate metabolites. FASEB J. 4:1654-1660, 1990.

8. D'Silva M, Gittes RF, Wolf P, Pirenne J, **Munger K,** Pascual J, Lee S. Rat kidney transplantation update with special reference to vesicle calculi. Microsurgery, 11(2):169-176, 1990.

9. Baylis C, **Munger K**. Persistence of maternal plasma volume expansion in midterm pregnant rats maintained on a zero sodium intake: Evidence that early gestational volume expansion does not require renal sodium retention. Clin Exper Hyperten. (Part B. Hypertension in Pregnancy), B9(3):237-247, 1990.

10. **Munger KA**, Suguira M, Takahashi K, Inagami T, Badr KF. A role for atrial natriuretic peptide in endothelin-induced natriuresis. J Am Soc Nephrol. 1(12):1278-1283, 1991.

11. McKanna JA, Chuncharunee A, **Munger KA**, Breyer JA, Cohen S, Harris RC. Localization of p35 (Annexin I, Lipocortin I) in normal adult rat kidney and during recovery from ischemia. J Cell Physiol. 153(3): 467-476, 1992.

12. Takahashi K, Harris RC, Capdevila J, Karara A, Makita K, Jacobson HR, **Munger KA**, Badr KF. Induction of renal arachidonate cytochrome P-450 epoxygenase following uninephrectomy: Counterregulation of hyperfiltration. J Am Soc Nephrol. 3(8):1496-1500, 1993.

13. **Munger KA**, Takahashi K, Awazu M, Frazer M, Falk SA, Conger JD, Badr KF. Maintenance of endothelin-induced renal arteriolar vasoconstriction in rats is cyclooxygenase dependent. Am J Physiol. 264 (Renal Fluid Electrolyte Physiol. 33): F637-F644, 1993.

14. **Munger KA**, Coffman TM, Griffiths, RC, Fogo A, Badr KF. The effects of surgery and acute rejection on glomerular hemodynamics in the transplanted rat kidney. Transplantation, 55(6):1219-1224, 1993.

15. Ferrario R, Takahashi K, Fogo A, Badr KF, **Munger KA**. Consequences of acute nitric oxide synthesis inhibition in experimental glomerulonephritis. J Am Soc Nephrol. 4(11):1847-1854, 1994.

16. **Munger KA**, Jackson EK. Effects of selective A1 receptor blockade on glomerular hemodynamics: Involvement of renin-angiotensin system. Amer J Physiol 267 (Renal Fluid Electrolyte Physiol 36):F783-F790, 1994.

17. Lakkis FG, Baddooura FK, Cruet EN, Parekh KR, Fukunaga M, **Munger KA**. Anti-inflammatory lymphokine mRNA expression in antibody-inducted glomerulonephritis. Kidney Int. 49:117-126, 1996.

18. **Munger KA**, Montero A, Fukanaga M, Uda S, Yura T, Imai E, Kaneda Y, Valdivielso J, Badr KF. Transfection of rat kidney with human 15-lipoxygenase suppresses inflammation and preserves function in experimental glomerulonephritis. Proc Natl Acad. Sci. 96(23): 13375-13380, 1999.

19. Montero A, **Munger KA**, Khan RR, Valdivielso JM, Morrow JD, Guasch A, Ziyadeh FN, Badr KF. F2-isoprostanes mediate high glucose-induced TGF-b synthesis and glomerular proteinuria in experimental type I diabetes. Kidney Int. 58(5):1963-1972, 2000.

20. Montero A, Nassar GM, Uda S, **Munger KA**, Badr KF. Reciprocal regulation of LTA4 hydrolase expression in human monocytes by g-interferon and interleukins 4 and 13: potential relevance to leukotriene regulation in glomerular disease. Exp Nephrology, 8(4-5): 258-265, 2000.

21. Blantz RC, Deng A, Lortie M, **Munger K,** Vallon V, Gabbai FB, Thomson SC. The complex role of nitric oxide in the regulation of glomerular ultrafiltration. Kidney Int. 61:782-885, 2002.

22. Blantz RC, **Munger KA**. Role of nitric oxide in inflammatory conditions. Distinguished Lecture Series. Nephron 90(4):373-378, 2002.

23. Deng A, Valdivielso JM, **Munger KA**, Blantz RC, Thomson SC. Vasodilatory N-methyl-D-aspartate (NMDA) receptors are constitutively expressed in rat kidney. J Am Soc Nephrol. 13(5):1381-1384, 2002.

24. Valdivielso JM, Montero A, Badr KF **Munger K**. Inhibition of 5-lipoxygenase activating protein decreases proteinuria in diabetic rats. J Nephrol. 16(1):85-94, 2003.

25. Deng A, **Munger KA**, Valdivielso JM, Satriano J, Lortie M, Blantz RC, Thomson SC. Increased expression of ornithine decarboxylase in distal tubules of early diabetic rat kidneys. Are polyamines paracrine hypertrophy factors? Diabetes, 52(5): 1235-1239, 2003.

26. Montero A, Uda S, Kelavkar U, Yoshimura A, Badr KF, **Munger KA**. Increased 5-lipoxygenase activating protein in immune-mediated experimental nephritis. J Nephrol. 16(5):682-690, 2003.

27. Slomowitz LA, Gabbai FB, Khang SJ, Satriano J, Thareau S, Deng A, Thomson SC, Blantz RC, **Munger KA**. Protein intake regulates the vasodilatory function of the kidney and NMDA receptor expression. Am J Physiol Regul Integr Comp Physiol. 287(5):R1184-R1189, 2004.

28. Lortie MJ, Satriano J, Gabbai F, Thareau S, Khang S, Deng A, Pizzo DP, Thomson SC, Blantz RC, **Munger KA**. Production of arginine by the kidney is impaired in a model of sepsis: early events following LPS. Amer J Physiol Regul Integr Comp Physiol. 287(6):R1434-R1440, 2004.

29. Deng A, Miracle CM, Suarez JM, Lortie M, Satriano J, Thomson SC, **Munger KA**, Blantz RC. Oxygen consumption in the kidney: effects of nitric oxide synthase isoforms and angiotensin II. Kidney Int. 68(2):723-730, 2005.

30. Satriano J, Lortie MJ, Ishizuka S, Valdivielso JM, Friedman B, **Munger KA**. Inhibition of inducible nitric oxide synthase alters Thy-1 glomeruonephritis in rats. Nephron Physiol.

102:17-26, 2006.

31. Deng A, Miracle CM, Lortie M, Satriano J, Gabbai FB, **Munger KA**, Thomson SC, Blantz RC. Kidney oxygen consumption, carbonic anhydrase, and proton secretion. Amer J Physiol Renal Physiol. 290(5):F1009-F1015, 2006.

32. **Munger KA**, Blantz RC, Lortie MJ. Acute renal response to LPS: impaired arginine production and inducible nitric oxide synthase activity. Am J Physiol Regul Integr Comp Physiol. 291(3):R684-R691, 2006.

33. Ruiz M, Singh P, Thomson SC, **Munger K**, Blantz RC, Gabbai FB. L-arginine-induced glomerular hyperfiltration response: the roles of insulin and ANGII. Am J Physiol Regul Integr Comp Physiol. 294(5):R1744-R1751, 2008.

34. Hu Y, Ehli EA, Kittelsrud J, Ronan PJ, **Munger K**, Downey T, Bohlen K, Callaha L, Munson V, Jahnke M, Marshall LL, Nelson K, Huizenga P, Hansen R, Soundy TJ, Davies GE. Lipid-lowering effect of berberine in human subjects and rats. Phytomedicine 19(10):861-67, 2012.

35. **Munger KA**, Downey TM, Haberer B, Pohnson K, Marshal LL, Utecht RE. Use of a novel photochemical cross-linking technology to improve luminal gain, vessel compliance, and buckling post-angioplasty in porcine arteries. Journal of Biomedical Materials: Part B. 104B: 375-384, 2016.

36 Gorres-Martens BK, Field TJ, Schmidt ER, **Munger KA**. Exercise prevents HFD- and OVX-induced type 2 diabetes risk factors by decreasing fat storage and improving fuel utilization. Physiological Reports. 6(13)e12783, 2018.

CHAPTERS AND OTHER WORKS:

1. **Munger, KA**. Sex-Dependent Differences in Renal Hemodynamics and Prostaglandin Synthesis in Rats. Thesis Dissertation, University of California, San Diego, 1988.

2. **Munger K**, Badr K. Endothelin: New insights into cellular mechanisms and renal actions. Chapter 13, Contemporary Issues in Nephrology, edited by Drs. J. Stein, F. Ziyadeh, and S. Goldfarb. Churchhill Livingston, Inc, New York. 1991.

3. Jackson ER, Donnenberg AD, **Munger KA**, Day RD. Data Management. Section 1, Handbook on Integrity in Biomedical Research. University of Pittsburgh School of Medicine, 1992.

4. **Munger KA**, Badr KF. Hormonal regulation of glomerular filtration rate. In Principles of Medical Biology, Ed. Bittar E, Elsevier, New York, 1995.

5. Lakkis FG, Cruet EN, Fukunaga M, **Munger KA.** Evidence for reciprocal regulation of pro- and anti-inflammatory lymphokines in rat nephrotoxic serum (NTS) nephritis. In: Advances in Prostaglandin, Thromboxane, and Leukotriene Research, Ed. Samuelsson B, 23:307-309,

Raven Press, New York, 1995.

6. Montero A, Uda S, **Munger KA**, Badr KF. Chapter 66. LTA4 hydrolase expression during glomerular inflammation: Correlation of immunohistochemical localization with cytokine regulation. In Eicosanoids and Other Bioactive Lipids in Cancer, Inflammation, and Radiation Injury 4. Eds: Horn, KV, Marnett, LJ, Nigam, S, and Dennis EA. In the series: Advances in Experimental Medicine and Biology. Springer, New York, 469: 449-54, 1999.

7. Valdivielso, JM, Montero, A, **Munger KA**, Badr, KF. Chapter 13. Inhibition of 5-LO activating protein (FLAP) activity decreases proteinuria in streptozotocin (STZ)-induced diabetic rats. In Eicosanoids and Other Bioactive Lipids in Cancer, Inflammation, and Radiation Injury, 5. Eds: Horn, KV, Marnett, LJ, Nigam, S, and Dennis EA. In the series: In the series: Advances in Experimental Medicine and Biology. Springer, New York, 507:79-83, 2002.

8. **Munger KA**, Kost CK, Brenner BM, Maddox DA. Chapter 3. The renal circulations and glomerular ultrafiltration. Brenner and Rector's The Kidney, 9th edition. Elsevier Saunders, Philadelphia, 94-1372012.

9. **Munger KA** Maddox DA, Brenner BM, and Kost CK. Chapter 3. The renal circulations and glomerular ultrafiltration. Brenner and Rector's The Kidney, 10th edition. *ISBN 978-1-4557-4836-5*. Saunders, Philadelphia, pp 83-111, 2016.

10. **Munger KA** Maddox DA, and Navar, LG. Chapter 3. The renal circulations and glomerular ultrafiltration. Brenner and Rector's The Kidney, 11th edition. *In press, 2019*.

http://www.ncbi.nlm.nih.gov/sites/myncbi/karen.munger.1/bibliography/49613228/public/?sort=date&direction=ascending.

ABSTRACTS AND PRESENTATIONS AT PROFESSIONAL MEETINGS:

1. Stebbins CL, **Munger K**, Longhurst JC. Bradykinin stimulation of skeletal muscle afferents contributes to the exercise reflex. Clin Res. 33:91A, 1985.

2. Stebbins CL, **Munger K**, Longhurst JC. The role of bradykinin in the reflex cardiovascular response to muscular contraction. Federation Proc. 44:817, 1985.

3. **Munger K**, Grzyboski C, Mitchell M, Baylis C. Urine prostaglandins in male and female Munich-Wistar rats; studies under anesthesia in control euvolemia and with acute indomethacin compared to the awake state. Kidney Int. 31 (1):281, 1987.

4. **Munger KA**, Blantz RC. Effects of saralasin on cyclooxygenase inhibition in female rats. Kidney Int. 33:277, 1988.

5. **Munger K**, Blantz R. Renal hemodynamic effects of castration on cyclooxygenase inhibition in male Munich-Wistar rats. FASEB. 2(5):A-965, 1988.

6. **Munger KA**, Takahashi K, Ebert J, Badr KF. Renal hemodynamic responses to 5,6-epoxyeicosanetraenoic acid in the rat: Interactions with the cyclooxygenase pathway. Kidney Int. 35(1):296, 1989.

7. **Munger KA**, Sugiura M, Inagami T, Takahashi K, Badr KF. Mechanisms of endothelin-induced natriuresis in the rat. Clin Res. 37(2):497A, 1989.

8. Takahashi K, Capdevila J, **Munger K**, Jacobson HR, Badr KF. A role for cytochrome P-450 arachidonate metabolites in the contralateral renal hemodynamic response to uninephrectomy. Clin Res. 37(2):503A, 1989.

9. Shube S, Girardi S, **Munger K**, Baylis C. The early plasma volume expansion (PVE) of pregnancy is not due to net renal sodium retention. Kidney Int. 37(1):571, 1990.

10. **Munger KA**, Takahashi K, Ebert J, Badr KF. Role for cyclooxygenase (CO) products in mediating rat renal response to endothelin (ET). Kidney Int. 37(1):375, 1990.

11. **Munger KA**, Suguira M, Inagami T, Badr KF. Atrial natriuretic factor (ANF) mediates endothelin (ET)-induced natriuresis in the rat. Kidney Int. 37(1):375, 1990.

12. Badr KF, **Munger KA**, Miller E. Increased glomerular synthesis of a novel monocyte-derived peptide agonist, neutrophil activating factor (NAF), during late nephrotic serum nephritis (NTS) in rats. Kidney Int. 37(1):352, 1990.

13. **Munger KA**, Katoh T, Ebert J, Fogo A, Coffman T, Griffiths R, Badr KF. Glomerular dynamics in the transplanted rat kidney: Evidence for a functional reduction in GFR in the syngeneic graft. J Amer Soc Nephrol. 1(4):751, 1990.

14. **Munger KA**, Jackson EK. Direct evidence that afferent arteriolar resistance and sodium excretion is regulated by endogenous adenosine/A1 receptor interactions in vivo. J Am Soc Nephrol. 3(3):567, 1992.

15. **Munger KA**, Blair I, Badr KF. Stimulation of urinary epoxyeicosatrienoic acid (EET) excretion following increases in renal perfusion pressure (RPP): a potential renal autoregulatory response impaired in salt-sensitive Dahl rats. J Am Soc Nephrol. 4(3):584, 1993.

16. **Munger KA**, Badr KF. Renal actions of 19(R)Hydroxy-prostaglandin E2 (19-OH-PGE2): an endogenous cytochrome P450 metabolite of PGE2 in rat kidney. J Am Soc Nephrol. 4(3):437, 1993.

17. Lakkis FG, Cruet EN, Fukunaga M, **Munger KA**. Evidence for reciprocal regulation of pro- and anti-inflammatory lymphokines in rat nephrotoxic serum (NTS) nephritis. 9th International Conference on Prostaglandins and Related Compounds, Milan, Italy. June, 1994.

18. Badr KF, Cruet EN, Fukunaga M, **Munger KA**, Lakkis FG. Correlation between interleukin-4 (IL-4) expression and induction of a glomerular 12/15-lipoxygenase (12/15-

LO) in nephrotoxic serum (NTS) nephritis in the rat. 9th International Conference on Prostaglandins and Related Compounds, Milan, Italy. June, 1994.

19. **Munger KA**, Funk CD, Fogo A, Assmann KJN, Badr KF. The biology of glomerulonephritis (GN) in 5-lipoxygenase gene-deleted mice (5-LO-/-). J Am Soc Nephrol. 6(3):878, 1995.

20. Yura T, Fukunaga M, **Munger KA**, Imai E, Badr KF. In vivo transfection of human arachidonate 15-lipoxygenase (15-LO) gene into the rat kidney: Impact on nephrotoxic serum nephritis (NTS). J Am Soc Nephrol. 6(3):890, 1995.

21. Carey T, Cruet E, **Munger K,** Serhan CN, Badr KF. Cyclooxygenase II (COX II) expression and lipoxin (LX) biosynthesis in passive (NTS) and accelerated (aNTS) nephrotoxic serum nephritis in the rat: Modulation by aspirin (ASA) therapy. J Am Soc Nephrol. 6(3):753, 1995.

22. Carey T, **Munger K**, Serhan CN, Badr KF. In vivo evidence for epi-lipoxin generation following aspirin (ASA) therapy in glomerulonephritic rats. J Amer Soc Nephrol. 7(9):1645, 1996.

23. **Munger K**, Montero A, Fukanaga M, Yura T, Badr KF. In vivo transfection of human arachidonate 15-lipoxygenase (15-LO) into the rat kidney: Evidence for suppression of leukotriene synthesis and for functional protection during accelerated nephrotoxic serum nephritis. J Am Soc Nephrol. 7(9):1649, 1996.

24. Uda S, **Munger K**, Badr KF. Glomerular localization of 5-lipoxygenase activating protein (FLAP) in a rat model of proliferative glomerulonephritis (GN). J Amer Soc Nephrol. 8:418A, 1997.

25. Montero A, Uda S, **Munger K**, Badr KF. LTA4 hydrolase expression during glomerular inflammation: Correlation of immunohistochemical localization with cytokine regulation. J Am Soc Nephrol. 8:479A, 1997.

26. **Munger K**, Montero A, Fukanaga M, Uda S, Wang S, Badr KF. Transfection of human 15-lipoxygenase (h15-LO) into the rat kidney confers functional protection during accelerated nephrotoxic serum nephritis (aNTS). J Am Soc Nephrol. 8:479A, 1997.

27. **Munger KA**, Montero A, Wang S, Badr KF. Time-dependent expression of endothelial and inducible nitric oxide synthases (eNOS/iNOS) during experimental glomerulonephritis (GN) in rats: Evidence for differential regulation and functional "role switch". J Amer Soc Nephrol. 9:404A, 1998.

28. **Munger KA**, Uda S, Montero A, Badr KF. Beneficial effects of 5-lipoxygenase activating protein (FLAP) inhibition in accelerated nephrotoxic serum nephritis (Agn) and passive Heymann's Nephritis (PHN) in rats. J Am Soc Nephrol. 10:533A, 1999.

29. Montero A, Uda S, **Munger KA**, Valdivielso JM, Badr KF. Expression of 5-lipoxygenase (LO) activating protein (FLAP) enhances albumin permeability in glomerular endothelial

cells. J Am Soc Nephrol. 10:554A, 1999.

30. Montero A, Kahn RZ, **Munger KA**, Valdivielso JM, Ziyadeh FN, Badr KF. High glucose-induced synthesis of transforming growth factor-b (TGF-b) in glomerular cells is driven by F2-isoprostane formation. J Am Soc Nephrol. 10:687A, 1999.

31. Montero A, Morrow JD, Valdivielso JM, **Munger KA**, Ziyadeh FN, Badr KF. Inhibition of F2-isoprostane synthesis reduces proteinuria and improves renal function in streptozotocin (STZ) diabetic rats. J Amer Soc Nephrol. 10:687A, 1999.

32. Satriano J, Schwartz D, Isome M, **Munger K,** Blantz R. Counter regulation of polyamine pathways. J Am Soc Nephrol. 11:464A, 2000.

33. Montero A, Morrow J, Valdivielso JM, **Munger KA**, Hennigar R, Ziyadeh FN, Wang S, Guasch A, and Badr KF. Reduction of F2-Isoprostanes synthesis attenuates transforming growth factor-b (TGF-b) and extracellular matrix gene expression during streptozotocin (STZ)- induced diabetic nephropathy. J Amer Soc Nephrol. 11:648A, 2000.

34. Valdivielso JM, Montero A, **Munger KA**, Badr KF. Inhibition of 5-lipoxygenase (5-LO) activating protein (FLAP) activity decreases endothelial permeability independently of leukotriene synthesis. J Am Soc Nephrol. 11:520A, 2000.

35. Valdivielso JM, Montero A, **Munger KA,** Badr KF. Inhibition of 5-lipoxygenase activating protein (FLAP) activity but not 5-lipoxygenase (5-LO) decreases proteinuria in streptozotocin (STZ)-induced diabetic rats. J Am Soc Nephrol. 11:654A, 2000.

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- Presented at various regional, national, and international meetings since 1983. Presented at international meetings in Vienna, Sidney and Tokyo. Invited lectures at Kagawa Medical University, Kagawa, Japan in 1997 and 1999.

- Chaired scientific sessions at FASEB, American Society of Nephrology and American Heart Association annual meetings. Chaired sessions for both ASN (Philadelphia) and AHA (Dallas) meetings fall, 2005. Chaired session at Experimental Biology 2006 (EB2006) meetings in San Francisco April 2006.

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