

CURRICULUM VITAE

Kirstan Kathleen Meldrum (Donnahoo)

EDUCATION

- Undergraduate: Smith College, Northampton, Massachusetts
Bachelor of Arts in Biochemistry, May 1990.
- Graduate: University of Colorado Health Sciences Center
Denver, Colorado
Doctor of Medicine with Honors, May, 1994.
- Residency: Indiana University Medical Center
Indianapolis, Indiana
General Surgery (1994 - 1996), Urology (1996 - 2000)
- Fellowship: Johns Hopkins Hospital (2000-2002)
Pediatric Urology

HONORS

- Doctor of Medicine with Honors, 1994
Alpha Omega Alpha Honor Society, 1994
The George Packard Award for Outstanding Performance in Surgery, 1993

PUBLICATIONS

1. **Donnahoo, KK**, Cain, MP, Pope, JC, Casale, AJ, Keating, MA, Adams, MC, and Rink, RC: Etiology, management, and surgical complications of congenital chordee without hypospadias. **J Urol**, 160: 1120-2, 1998.
2. **Donnahoo, KK**, Rink, RC, Cain, MP, and Casale, AJ: The Young-Dees-Leadbetter bladder neck repair for neurogenic incontinence. **J. Urol**, 161: 1946-9, 1999.
3. **Donnahoo KK**, Shames BD, Harken AH, and Meldrum DR: The role of tumor necrosis factor in renal ischemia-reperfusion injury. **J Urol**, 162: 196-203, 1999.
4. Meldrum DR, Cain BS, Cleveland JC, Meng X, Shames BD, **Donnahoo KK**, Banerjee A, Harken AH: Calcium preconditioning, but not ischemic

preconditioning, bypasses the adenosine triphosphate dependent potassium (KATP) channel. **J Surg Res**, 85: 77-82, 1999.

5. Meldrum, DR, and **Donnahoo, KK**: Role of TNF in mediating renal insufficiency following cardiac surgery: evidence of a postbypass cardiorenal syndrome. **J Surg Res**, 85: 185-9, 1999.
6. Meldrum DR, Meng X, Shames BD, Pomerantz B, **Donnahoo KK**, Banerjee A, Harken AH: Liposomal delivery of heat shock protein 72 into the heart prevents endotoxin-induced myocardial contractile dysfunction. **Surgery**, 126: 135-41, 1999.
7. **Donnahoo, KK**, Meng, X, Ayala, A, Cain, MP, Harken, AH, and Meldrum, DR: Early kidney TNF-alpha expression mediates neutrophil infiltration and injury after renal ischemia-reperfusion. **Am J Physiol (Rapid Communication)**, 277(3 Pt 2): R922-9, 1999.
8. **Donnahoo, KK** and Cain, MP: Pediatric urology, in Harken, AH, and Moore, EE (ed): *Surgical Secrets*, Ed 4. Philadelphia, Hanley and Belfus, Inc., 1999.
9. **Donnahoo, KK**, Meldrum, DR, Shenkar, R, Chung, CS, Abraham, E, Harken, AH: Early renal ischemia, with or without reperfusion, activates NFkappaB and increases TNF-alpha bioactivity in the kidney. **J Urol**, 163: 1328-32, 2000.
10. **Donnahoo, KK**, Meng, X, Ao, L, Ayala, A, Shames, BD, Cain, MP, Harken, AH, and Meldrum, DR: Differential cellular immunolocalization of renal tumor necrosis factor- α production during ischemia versus endotoxaemia. **Immunology**, 102: 53-8, 2001.
11. **Meldrum, KK**, Meldrum, DR, Hile, KL, Yerkes, EB, Ayala, A, Cain, MP, Rink, RC, Casale, AJ, and Kaefer, MA: p38 MAPK mediates renal tubular cell TNF- α production and TNF- α dependent apoptosis during simulated ischemia. **Am J Physiol Cell Physiol**, 281: C563-70, 2001.
12. **Meldrum, KK**, Meldrum, DR, Sezen, SF, Crone, JK, and Burnett, AL: Heat shock prevents simulated ischemia-induced apoptosis in renal tubular cells via a PKC dependent mechanism. **Am J Physiol Regul Integr Comp Physiol (Rapid Communication)**, 281: R359-64, 2001.
13. **Meldrum, KK**, Meldrum, DR, Hile, KL, Burnett, AL, and Harken, AH: A novel model of ischemia in renal tubular cells which closely parallels in vivo injury. **J Surg Res**, 99: 288-93, 2001.
14. **Meldrum, KK**, Mathews, R, and Gearhart, JP: Hugh Hampton Young: A pioneer in pediatric urology. **J Urol**, 166: 1415-7, 2001.

15. **Meldrum, KK**, Meldrum, DR, Meng X, Ao L, and Harken AH: TNF-alpha-dependent bilateral renal injury is induced by unilateral renal ischemia-reperfusion. **Am J Physiol Heart Circ Physiol**, 282: H540-6, 2002.
16. **Meldrum, KK**, Hile, K, Meldrum, DR, Crone, JA, Gearhart, JP, and Burnett, AL: Simulated-ischemia induces renal tubular cell apoptosis through an NFκB dependent mechanism. **J Urol**, 168: 248-52, 2002.
17. **Meldrum, KK**, Burnett, AL, Meng, X, Misseri, R, Shaw, MBK, Gearhart, JP, and Meldrum, DR: Liposomal delivery of heat shock protein-72 into renal tubular cells blocks NFκB activation, TNF production, and subsequent ischemia-induced apoptosis. **Circ Res**, 92: 293-299, 2003.
18. **Meldrum KK**, Baird, AD, and Gearhart JP: Pelvic and extremity immobilization following bladder exstrophy closure: associated complications and impact on surgical success. **Urology**, 62: 1109-13, 2003.
19. Meldrum DR, Partrick DA, Cleveland JC Jr., Shenkar R, **Meldrum KK**, Raiesdana A, Ayala A, Brown JW, and Harken AH: On-pump coronary artery bypass surgery activates human myocardial NF-kappaB and increases TNF-alpha in the heart. **J Surg Res** 112: 175-9, 2003.
20. **Meldrum KK**: Editorial Comment. **Urology**, 61: 1232-1233, 2003.
21. **Meldrum KK** and Cain MP: Pediatric Urology. In Abernathy's Surgical Secrets 5th edition. Philadelphia, Hanley and Belfus, 2003, p. 340 –343.
22. Baker L, **Meldrum KK**, Wang M, Sankula R, Vanam R, Raiesdana A, Tsai BM, Hile K, Brown JW, Meldrum DR: The role of estrogen in cardiovascular disease. **J Surg Res**, 115: 325-44, 2003.
23. Wang M, Sankula R, Tsai BM, **Meldrum KK**, Turrentine M, March KL, Brown JW, Dinarello CA, Meldrum DR: P38 MAPK mediates myocardial proinflammatory cytokine production and endotoxin-induced contractile suppression. **Shock**, 21: 170-4, 2004.
24. Chung SY, **Meldrum KK**, Docimo SG: Laparoscopic assisted reconstructive surgery: a 7-year experience. **J Urol**, 171: 372-5, 2004.
25. Misseri R, Rink RC, Meldrum DR, **Meldrum KK**: Inflammatory mediators and growth factors in obstructive renal injury. **J Surg Res**, 119: 149-59, 2004.
26. Wang M, Sankula R, Tsai BM, **Meldrum KK**, Turrentine M, March KL, Brown JW, Dinarello CA, Meldrum DR. P38 MAPK mediates myocardial

proinflammatory cytokine production and endotoxin-induced contractile suppression. **Shock**, 21: 170-4, 2004.

27. Misseri R., Meldrum D.R., Hile K., Rink R.C., and **Meldrum K.K.**: Unilateral ureteral obstruction induces renal tubular cell production of TNF- α independent of inflammatory cell infiltration. **J Urol**, 172: 1595-9, 2004.
28. Tsai BM, Wang M, Pitcher JM, **Meldrum KK**, Meldrum DR.: Hypoxic pulmonary vasoconstriction and pulmonary artery tissue cytokine expression are mediated by protein kinase C. **Am J Physiol Lung Cell Mol Physiol**, 287: L1215-9, 2004.
29. Wang M, Baker L, Tsai BM, **Meldrum KK**, Meldrum DR: Sex differences in the myocardial inflammatory response to ischemia/reperfusion injury. **Am J Physiol Endocrinol Metab**, 288: E321-6, 2005.
30. Kher A, **Meldrum KK**, Wang M, Tsai BM, Pitcher JM, Meldrum DR: Cellular and molecular mechanisms of sex differences in renal ischemia-reperfusion injury. **Cardiovascular Res**, 67: 594-603, 2005.
31. Misseri R, Meldrum DR, Dinarello CA, Dagher P, Hile KL, Rink RC, **Meldrum KK**: TNF mediates obstruction-induced renal tubular cell apoptosis and pro-apoptotic signaling. **Am J Physiol Renal Physiol**, 288: F406-11, 2005.
32. Misseri R and **Meldrum KK**: Mediators of fibrosis and apoptosis in obstructive uropathies. **Curr Urol Rep**, 6: 140-5, 2005.
33. Meldrum DR, Wang M, Tsai BM, Kher A, Pitcher JM, Brown JW, **Meldrum KK**: Intracellular signaling mechanisms of sex hormones in acute myocardial inflammation and injury. **Frontiers in Bioscience**, 10: 1835-1867, 2005.
34. **Meldrum KK** and Rink RC: Nonspadiac penile anomalies: practical management in infants and children. **Contemporary Urology**, 17: 13-27, 2005.
35. **Meldrum KK**, Mathews RI, Nelson, CP, and Gearhart JP: Subspecialty training and surgical outcomes in children with a failed bladder exstrophy closure. **J Ped Urol**, 1: 95-99, 2005.
36. Kher A, **Meldrum KK**, Hile KL, Wang M, Tsai BM, Turrentine MW, Brown JW, Meldrum DR. Aprotinin improves kidney function and decreases tubular cell apoptosis and proapoptotic signaling after renal ischemia-reperfusion. **J Thorac Cardiovasc Surg**, 130: 662-9, 2005.

37. Misseri R, Cain MP, Casale AJ, Kaefer M, **Meldrum KK**, Rink RC.: Small intestinal submucosa bladder neck slings for incontinence associated with neuropathic bladder. **J Urol**, 174: 1691-3, 2005.
38. Metcalfe PD and **Meldrum KK**: Gender differences and the role of sex steroids in renal injury. **J Urol**, 2005, *in press*.
39. **Meldrum KK**, Metcalfe PD, Leslie JA, Misseri R, Hile KL, and Meldrum DR: TNF- α neutralization decreases nuclear factor κ B activation and apoptosis during renal obstruction. **J Surg Res**, 2005, *in press*.

PRESENTATIONS/ ABSTRACTS

Donnahoo, KK, Cain, MP, Pope, JC, Casale, AJ, Keating, MA, Adams, MC, Rink, RC: Etiology, Management, and Surgical Complications of Congenital Chordee Without Hypospadias. American Academy of Pediatrics, New Orleans, 1997.

Donnahoo, KK, Rink, RC, Cain, MP, Casale, AJ: The Use of the Young – Dees-Leadbetter Bladder Neck Repair in Patients with Neurogenic Bladder. AUA National Meeting, San Diego, 1998.

Donnahoo, KK, Meng, X, Ao, L, Ayala, A, Shames, BD, Cain, MP, Harken, AH, and Meldrum, DR: Differential Cellular Immunolocalization of Renal TNF- α Production During Ischemia Versus Endotoxemia. American Academy of Pediatrics, Washington D.C., 1999.

Meldrum, KK, Meldrum, DR, Sezen, S, Crone, J, Gearhart, JP, and Burnett, AL: Heat shock protein-72 inhibits ischemia-induced renal tubular cell apoptosis by preventing NF κ B activation and subsequent TNF- α production. AUA National Meeting, Anaheim, 2001.

Meldrum, KK and Gearhart JP: Methods of pelvic immobilization following bladder exstrophy closure: associated complications and impact on surgical success. Clinical Prize Finalist. American Academy of Pediatrics, Boston, 2002.

Meldrum, KK, Misseri, R, Rink RC, and Meldrum, DR: Tumor necrosis factor- α (TNF) mediates renal tubular cell apoptosis during obstructive uropathy. American College of Surgeons, Chicago, 2003.

Misseri, R, Meldrum, DR, Dinarello, CA, Hile, KL, Rink, RC, and **Meldrum, KK**: Tumor necrosis factor- α mediates obstruction induced renal cell apoptosis. American Academy of Pediatrics, New Orleans, 2003.

Meldrum KK, Mathews RI, and Gearhart JP: Referral base demographics and surgical outcomes in children with a failed bladder exstrophy closure. AUA national meeting, San Francisco, 2004.

Meldrum KK, Misseri R, Dinarello, CA, Rink RR, Hile KL, Cain MP, Meldrum DR: TNF- α mediates obstruction-induced renal fibrosis. American Academy of Pediatrics, San Francisco, 2004.

Metcalf PD, Meldrum DR, Hile KL, and **Meldrum KK**: Male gender and testosterone exacerbate obstructive renal injury. American Academy of Pediatrics, Washington DC, 2005.