



Renal Arterial References

DOG

- 7002A Cersosimo E, Molina PE, "Abumrad NN. Renal glucose production during insulin-induced hypoglycemia," *Diabetes*. 1997 Apr;46(4):643-6. (dog, renal a., chronic)
- 7004A Cersosimo E, Zaitseva IN, Ajmal M, "Effects of beta-adrenergic blockade on hepatic and renal glucose production during hypoglycemia in conscious dogs," *Am J Physiol*. 1998 Nov;275(5 Pt 1):E792-7.(dog, renal a., chronic)
- 7007A Cersosimo E, Molina PE, Abumrad NN, "Renal lactate metabolism and gluconeogenesis during insulin-induced hypoglycemia," *Diabetes*. 1998 Jul;47(7):1101-6. (dog, renal a., chronic)
- 7008A Jang Y, Shin HY, Kim JM, Lee MY, Keum DY, "Effects of magnesium sulfate on supraceliac aortic unclamping in experimental dogs," *J Korean Med Sci*. 2005 Aug;20(4):612-7. (dog, renal a., acute)
- 2584A Aumann, S., Schoenberg, S.O., Just, A., Briley-Saebo, K., Bjornerud, A., Bock, M., Brix, G., "Quantification of Renal Perfusion Using an Intravascular Contrast Agent (Part 1): Results in a Canine Model." *Mag Reson Med*, Vol. 49, Part 2., p. 276-87, February 2003. (dog, renal a., chronic)
- 2414A Berthold, H., Just, A., Kirchheim, H.R., Ehmke, H., "Interaction between nitric oxide and endogenous vasoconstrictors in control of renal blood flow," *Hypertension*, Vol. 34, No. 6, p. 1254-8, 1999. (dog, renal a., chronic)
- 2344A Hammond, R.L., Augustyniak, R.a., Rossi, N.F., Lapanowski, K., Dunbar, J.C., O'Leary, D.S., "Alteration of humoral and peripheral vascular responses during graded exercise in heart failure," *JAP*, Vol. 90, No. 1, p. 55-61, 2001. (dog, aorta, renal a., chronic)
- 2329A Moore, M.C., Satake, S., Baranowski, G., Hsieh, P.S., Neal, D.W., Cherrington, A.D., "Effect of hepatic denervation on peripheral insulin sensitivity in conscious dogs," *AJP*, Vol. 282, No. 2, p. E286-96, 2002. (dog, hepatic/portal, iliac a., renal a., chronic)
- 2146A Augustyniak, R.A., Collins, H.L., Ansoerge, E.J., Rossi, N.F., O'Leary, D.S., "Severe exercise alters the strength and mechanism of the muscle metaboreflex," *AJP*, Vol. 280, No. 4, p. H1645-52, 2001. (dog, asc. aorta, desc. aorta, renal a., coronary a. LCX, chronic)
- 2145A Collins, H.L., Augustynia, R.A., Ansoerge, E.J., O'Leary, D.S., "Carotid baroreflex pressor responses at rest and during exercise: cardiac output vs. regional vasoconstriction," *AJP*, Vol. 280, No. 2, p. H642-648, 2001. (dog, circumflex, asc. aorta, desc. aorta, renal a., chronic)
- 2104A Bellomo, R., Kellum, J.A., Wisniewski, S.R., Pinsky, M.R., "Effects of norepinephrine on the renal vasculature in normal and endo toxic dogs," *Am J Respir Crit Care Med*, Vol. 159, No. 4 Pt. 1, p. 1186-1192, 1999. (dog, hepatic/portal, renal a., acute)
- 2055A Tadano, K., Suzuki, J., Hanada, K., Nakao, M., Nakao, R., Uehara, S., Ohta, H., Miyauchi, T., Nishikibe, M., "Pathophysiological roles of endogenous endothelin-1 in dogs with chronic heart failure produced by rapid right ventricular pacing," *J Pharmacol Exp Ther*, Vol. 298, No. 2, p. 729-736, 2001. (dog, renal a., cardiac output, chronic)
- 2052A Suehiro, K., Shimizu, J., Yi, G-H., Gu, A., Wang, J., Keren, G., Burkhoff, D., "Selective renal vasodilation and active renal artery perfusion improve renal function in dogs with acute heart failure," *Jour of Pharmacol Exp Ther*, Vol. 298, No. 3, p. 1154-60, 2001. (dog, renal a., chronic)
- 2000A Just, A., Wittmann, U., Ehmke, H., Kirchheim, H.R., "Autoregulation of renal blood flow in the conscious dog and the contribution of the tubuloglomerular feedback," *J Physiol*, Vol. 506, Pt. 1, p. 275-90, 1998. (dog, renal a., chronic)
- 1987A 1987A: Berthold, H., Just, A., Kirchheim, H.R., Osswald, H., Ehmke, H., "Renal haemodynamic responses to exogenous and endogenous adenosine in conscious dogs," *J Physiol*, Vol. 510, Pt. 1, p. 321-30. 1998. (dog, renal a., chronic)
- 1986A Bach, A., Just, A., Berthold, H., Ehmke, H., Kirchheim, H., Borneff-Lipp, M., Sonntag, H.G., "Catheter-related infections in long-term catheterized dogs. Observations on pathogenesis, diagnostic methods, and antibiotic lock technique," *Aentrabl Bakteriell*, Vol. 288, No. 4, p. 541-42, 1998. (dog, renal a., chronic)
- 1982A Cases, A., Haas, J., Burnett, J.C., Romero, J.C., "Hemodynamic and renal effects of acute and progressive nitric oxide synthesis inhibition in anesthetized dogs," *AJP*, Vol. 280, No. 1, p. R143-148, 2001. (dog, renal a., SMA, iliac a., acute)
- 1960A Zhang, H., De Jongh, R., De Backer, D., Cherkaoui, S., Vray, B., Vincent, J.L., "Effects of alpha- and beta-adrenergic stimulation on hepatosplanchnic perfusion and oxygen extraction in endotoxic shock," *Critical Care Medicine*, Vol. 29, No. 3, p. 581-8, 2001. (dog, hepatic/portal, mesenteric a., renal a., femoral a., acute)





Renal Arterial References

- 1936A Wei, K., Le, E., Bin, J.P., Coggins, M., Thorpe, J., Kaul, S., "Quantification of renal blood flow with contrast-enhanced ultra sound," J Am Coll Cardiol, Vol, 37, No. 4, p. 1135-40, 2001. (*dog, renal a., acute*)
- 1843A Just, A., Ehmke, H., Toktomambetova, L., Kirchheim, H.R., "Dynamic characteristics and underlying mechanisms of renal blood flow autoregulation in the conscious dog," AJP, Vol. 280, No. 6, p. F1062-1071, 2001. (*dog, renal a., chronic*)
- 1746A Schoenberg, S.O., Bock, M., Kallinowshi, F., Just, A., "Correlation of Hemodynamic Impact and Morphologic Degree of Renal Artery Stenosis in a Canine Model," Journal of the American Society of Nephrology, Vol. 11, No. 12, p. 2190-98, 2000. (*dog, renal a., chronic*)
- 1666A Stulak, J.M., Juncos, L.A., Haas, J.A., Romero, J.C., "Systemic Hemodynamics and Renal Function in Hemorrhaged Dogs Resuscitated with Cross-Linked Hemoglobin," American Journal of Physiology, Vol. 278, No. 1, p. R28-33, 2000. (*dog, iliac a., mesenteric a., renal a., acute*)
- 1603A Laprad, S.L., Augustyniak, F.A., Hammond, R.L., O'Leary, D.S., "Does Gender Influence the Strength and Muscle Metaboreflex During Dynamic Exercise in Dogs?" American Journal of Physiology, Vol. 276, p. R1203-R1208, 1999. (*dog, asc. aorta,, terminal aorta, renal a., chronic*)
- 1427A Rodriguez-Porcel, M., Lerman, L.O., Sheedy, P.F., Romero, J.C., "Perfusion pressure dependency of in vivo renal tubular dynam ics," AJP, Vol. 273, No. 5Pt2, p. F667-673, 1997. (*dog, renal a., acute*)
- 1426A Nafz, B., Ehmke, H., Wagner, C.D., Kirchheim, H.R., Persson, P.B., "Blood pressure variability and urine flow in the conscious dog," AJP, Vol. 274, No. 4Pt2, p. F680-686, 1998. (*dog, renal a., chronic*)
- 1421A Just, A., Ehmke, H., Wittmann, U., Kirchheim, H.R. "Tonic and phasic influences of nitric oxide on renal blood flow autoregulation in consious dogs." Am. J. Physiol. 276: H442-49, 1999. (*dog, renal a., chronic*)
- 1419A Berthold, H., Munter, K., Just, A., Kirchheim, H.R., Ehmke, H. "Contribution of endothelin to renal vascular tome and autoregula tion in the consious dog." Am. J. Physiol. 276: F417-24, 1999. (*dog, renal a., chronic*)
- 1402A Schoenberg, S.O., Knopp, M.V., Bock, M., Kallinowski, F., Just, A., Essig, M., Hawighorst, H., Zuna, I., Schad, L., Allenberg, J.R., van Kaick, G., "Assessment of hemodynamic changes in patients with renal artery stenosis by means of the cine MR phase-contrast technique," Der Radiologe, Vol. 37, No. 8, p. 651-662, 1997. (*dog, renal a., acute*)
- 1384A Sheriff, D.D., Augustyniak, R.A., O'Leary, D.S., "Muscle Chemoreflex-Induced Increases in Right Artrial Pressure," American Journal of Physiology, Vol. 27, p. H767-H775, 1998. (*dog, asc. aorta, terminal aorta, renal a., chronic*)
- 1326A Siragy, H.M., Jaffa, A.A., Margolius, H.S. "Bradykinin B2 receptor modulates renal prostaglandin E2 and nitric oxide." Hypertension 1997 Mar;29(3):757-62. (*dog, renal a., acute*)
- 1321A Gonzalez, J.D., Llinas, M.T., Nava, E., Ghiadoni, L., Salazar, F.J. "Role of nitric oxide and prostaglandins in the long-term control of renal function." Hypertension 1998 Jul;32(1):33-8. (*dog, renal a., chronic*)
- 1319A Berthold, H., Munter, K., Just, A., Kirchheim, H.R., Ehmke, H. "Stimulation of the renin-angiotensin system by endothelin sub type A receptor blockade in conscious dogs." Hypertension 1999 Jun;33(6):1420-4. (*dog, renal a. chronic*)
- 1284A Villa, E., Gonzalez-Albarran, O., Rabano, A., Garcia-Robles, R. "Effects of hyperinsulinemia on vascular blood flows in experimen tal obesity." J Steriod Biochem Mol Biol, 69(1-6):273-9, 1999. (*dog, renal a., mesenteric a., femoral a., acute*)
- 1177A Zhang, H., Rogiers, P., Smail, N., Cabral, A., Preiser, J.C., Peny, M.O., Vincent, J.L., "Effects of Nitric Oxide on Blood Flow Distribution and O2 Extraction Capabilities during Endotoxic Shock," JAP, Vol. 83, No. 4, p. 1164-1173, 1997. (*dog, hepatic/portal, renal a., SMA, acute*)
- 1176A Zhang H, Smail N, Cabral A, Rogiers P, Vincent JL, "Effects of norepinephrine on regional blood flow and oxygen extraction capabilities during endotoxic shock." Am J Respir Crit Care Med 1997 June;155(6): 1965-1971. (*dog, SMA, femoral a., renal a., acute*)
- 1175A Zhang H, Rogiers P, Preiser J.C., Spapen H, Manikis P, Metz G, Vincent J.L., "Effects of methylene blue on oxygen availability and regional blood flow during endotoxic shock." Crit Care Med 1995 Oct; 23(10):1711-1721. (*dog, SMA, femoral a., renal a., acute*)





Renal Arterial References

- 1174A Zhang, H., Rogiers, P., De Backer, D., Spapen, H., Manikis, P., Schmartz, D., Vincent, J.L., "Regional arteriovenous differences in P(CO₂) and pH can reflect critical organ oxygen delivery during endotoxemia," *Shock*, Vol. 5, No. 5, p. 349-59, 1996. (*dog, SMA, femoral a., renal a., acute*)
- 1173A Zhang, H., Rogiers, P., Friedman, G., Preiser, J.C., Spalen, H., Buurman, W.A., Vincent, J.L., "Effects of Nitric oxide donor SIN-1 on oxygen availability and regional blood flow during endotoxic shock." *Arch Surg*, Vol. 131, No. 7, p. 767-774, 1996. (*dog, SMA, renal a., femoral a., acute*)
- 1165A Fitzgerald, S.M., Stevenson, K.M., Evans, R.G., Anderson, W.P., "Effects of long-term intrarenal angiotensin II infusion on renal vascular responsiveness to vasoactive agents," *Clin Exp Pharmacol Physiol*, Vol. 25, No. 7-8, p. 633-636, 1998. (*dog, renal a., chronic*)
- 1118A Fitzgerald, S.M., Stevenson, K.M., Evans, R.G., Anderson, W. P., "Low dose angiotensin II infusions into the renal artery induce chronic hypertension in conscious dogs," *Blood Pressure*, Vol. 6, No. 1, p. 52-61, 1997. (*dog, renal a., chronic*)
- 1114A Cook, D.J., Orszulak, T.A., Daly, R.C., "Effects of pulsatile cardiopulmonary bypass on cerebral and renal blood flow in dogs," *J Cardiothorac Vasc Anesth*, Vol. 11, No. 4, p. 420-427, 1997. (*dog, renal a., acute*)
- 1110A Evans, R.G., Stevenson, K.M., Malpas, S.C., Fitzgerald, S.M., Shweta, A., Towoda, F., Anderson, W.P., "Chronic Renal BF Measurement in Dogs by Transit Time Ultrasound Flowmetry," *J. Pharmacology and Toxicological Methods*, Vol. 38, No. 1, p. 33-39, 1997. (*dog, renal a., chronic*)
- 1109A Fitzgerald, A.M., Stevenson, K.m., Evans, R.G., Anderson, W.P., "Systemic Hemodynamic Responses to Chronic Angiotensin II Infusion into the renal Artery of Dogs," *American Journal of Physiology*, Vol. 273, R. 1980-R1989, 1997. (*dog, renal a., chronic*)
- 1108A Stevenson, K.M., Fitzgerald, S.M., Evans, R.G., Anderson, W.P., "Chronic intrarenal infusion of low-dose angiotensin II in dogs increases arterial pressure without impairment of renal function," *Clin Exp Pharmacol Physiol*, Vol. 24, No. 6, p. 439-441, 1997. (*dog, renal a., chronic*)
- 1078A Schoenberg, S.O., Knopp, M.V., Bock, M., Kallinowski, F., Just, A., Essog, M., Hawighorst, H. Schad, L., van Kaick, G., "Renal Artery Stenosis: Grading of hemodynamic Changes with Cine Phase-Contrast MR Blood Flow Measurements," *Radiology*, Vol. 203, No. 1, p. 45-53, 1997. (*dog, renal a., chronic*)
- 1077A Schoenberg, S.O., Just, A., Bock, M., Knopp, M.V., Persson, P.B., Kirchheim, H.R., "Non-invasive Analysis of Renal Artery Blood Flow Dynamics with MR-Cine Phase-Contrast Flow Measurements," *American Journal of Physiology*, Vol. 272 No. 5, pt. 2, p. H2577-H2484, 1997. (*dog, renal a., chronic*)
- 1021A Doi, R., Inoue, K., Kogire, M., Sumi, S., Tobe, T.; "Measurement of Splanchnic Circulation in Dogs: Changes Induced by Prostaglandin E1." *Scand-J-Gastroenterol*. Vol. 25, No. 9, p. 951-6, September 1990. (*dog, hepatic/portal, renal a., SMA, acute*)
- 982A Visscher, C.A., De-Zeeuw, D., De-Jong, P.E., Sluiter, W.J., Huisman, R.M., "Drug Induced Changes in Renal Hippurate Clearance as a Measure of Renal Blood Flow." *Kidney-Int*. Vol. 48, No. 5, p. 1617-23, November 1995. (*dog, renal a., chronic*)
- 974A Visscher, C.A., De-Zeeuw, D., Navis, G., Van-Zanten, A.K., D.E. Jong, P.E., Huisman, R.M., "Renal 1311-Hippurate Clearance Overestimates True Renal Blood Flow in the Instrumented Conscious Dog." *AJP*, Vol. 271, No. 2 of 2: p. F269-74, August 1996. (*dog, renal a., chronic*)
- 918A Moursi, M.M., Facktor, M.A., Zelenock, G.B., D'Alecy, L.G., "Delayed Onset Hypertension with Infrarenal Aortic Cross-Clamping in Dogs," *Journal of Surgical Research*, Vol. 56, p. 168-178, 1994. (*dog, pulmonary a., renal a., acute*)
- 892A Moursi, M.M., Facktor, M.A., Zelenock, G.B., D'Alecy, L.G., "Systemic Hypertension Induced by Aortic-Cross Clamping: Detrimental Effects of Direct Smooth Muscle Relaxation Compared with Ganglionic Blockade," *Journal of Vascular Surgery*, Vol. 19, No. 4, p. 707-716, 1994. (*dog, pulmonary a., renal a., acute*)
- 890A Zhang, H., Rogiers, P., Friedman, G., Preiser, J.C., Spapen, H. "Effects of Nitric Oxide Donor SIN-1 On Oxygen Availability and Regional Blood Flow During Endotoxic Shock." *Arch Surg*, Vol. 131, No. 7, p. 767-774, 1996. (*dog, SMA, renal a., acute*)
- 845A Gwartz, P.A. "Coronary alpha-1-constrictor Tone During Renovascular Hypertension." *Circulation*, Vol. 92, p. 1576-1581, 1995. (*dog, renal a., chronic*)
- 838A De Backer, Zhang, H., Manikas, P., Vincent, J.L., "Regional Effects of Dobutamine on Endotoxic Shock," *Journal of Surgical Research*, Vol. 65, p. 93-100, 1996. (*dog, mesenteric a., renal a., femoral a., acute*)
- 837A Giglia, J.S., Zelenock, G.B., D'Alecy, L.G., "Infrarenal Aortic Clamp Hypertension Is Exacerbated by Baroreceptor



Renal Arterial References

- Blockade," *Journal of Surgical Research*, Vol. 64, p. 112-115, 1996. (*dog, renal a., pulmonary a., acute*)
- 808A Brooks, D.P., DePalma, P.D., Cyronak, M.J., Bryant, M.A., Karpinski, K., Mico, B., Gaitanopoulos, D.E., Chambers, P.A., Erhard, K.F., Weinstock, J., "Identification of Fenoldopan Prodrugs with Prolonged Renal Vasodilatory Activity," *The Journal of Pharmacology and Experimental Therapeutics*, Vol. 254, No. 3, p. 1084--1089, 1990. (*dog, renal a., acute*)
- 743A Zhang, H., Spapen, H., Nguyen, D.N., Rogiers, P., Bakker, J., Vincent, J.L., "Effects of N-Acetyl-L-Cysteine on Regional Blood Flow During Endotoxic Shock," *European Surgical Research*, Vol. 27, p. 292-300, 1995. (*dog, SMA, femoral a., renal a., acute*)
- 683A Ehmke, H., Just, A., Eckardt, K-U, Persson, P.B., Bauer, C., Kirchheim, H.R., "Modulation of Eerthropoietin Formation by Changes in Blood Volume in Conscious Dogs," *Journal of Physiology*, Vol. 4488, No. 1, p. 181-191, 1995. (*dog, renal a., chronic*)
- 628A Wittman, U., Nafz, B., Kirchheim, H.R., Persson, P.B., "Frequency Domain of Renal Autoregulation in the Conscious Dog", *American Journal of Physiology*, Vol. 269 (3 pt 2), p.F317-22, 1995. (*dog, renal a., chronic*)
- 600A Seymour, A.A., Burkett, D.E., Asaad, M.M., Lanoce, V.M., Clemons, A.F., Rogers, W.L., "Hemodynamic, Renal and Hormonal Effects of Rapid Ventricular Pacing in Conscious Dogs," *Laboratory Animal Science*, Vol. 44, No. 5, p.443-52, 1994. (*dog, asc. aorta, renal a., chronic*)
- 595A Wagner, C.D., Persson, P.B., "Nonlinear Chaotic Dynamics of Arterial Blood Pressure and Renal Blood Flow", *American Journal of Physiology* Vol. 268 (2Pt2), p. H621-7, 1995. (*dog, renal a., chronic*)
- 578A Whiting M.V., Cambridge, D., "Canine Renovascular Responses to Sumatriptan and 5-carbx-amidotryptamine: Modulation Through Endothelial 5HT1-like Receptors by Endogenous Nitric Oxide", *British Journal of Pharmacology*, Vol. 114, No. 5, p.969-74, 1995. (*dog, renal a., acute*)
- 450A Chiu, A.W., Azadzoi, K.M., Hatzichristou, D.G., Siroky, M.B., Krane, R.J., Babyyan, R.K., "Effects of Intra-Abdominal Pressure on Renal Tissue Perfusion during Paparoscopy" *Journal of Endurology*, Vol. 8, No. 2, p. 99-103, 1994. (*dog, renal a.*)
- 387A Nishiwaki, H., Ko, I., Hiura, A., Ha, S.S., Satake, K., Sowa, M., "Renal Microcirculation in Experimental Acute Pancreatitis in Dogs", *Renal Failure*, Vol. 15, No. 1, p.27-31, 1993. (*dog, renal a., cardiac output, acute*)
- 360A Schertel, E.R., Valentine, A.K., Schmall, L. M., Allen, D.A., Muir, W.W., "Vagotomy Alters the Hemodynamic Response of Dogs in Hemorrhagic Shock", *Circulatory Shock*, p.393-397, 1991. (*dog, renal a., acute*)
- 306A Persson, P.B., Baumann, J.E., Ehmke, H., Hackenthal, E., Kirchheim, H.R., Natz, B., "Endothelium Derived NO Stimulates Pressure-Dependent Renin Release in Conscious Dogs," *American Journal of Physiology*, Vol. 264, p. F943-47, 1993. (*dog, renal a., chronic*)
- 235A Baumann, J.E., Persson, B., Ehmke, H., Nafz, B., and Kirchheim, H.R., "Role of Endothelium-Derived Relaxing Factor in Renal Autoregulation in Conscious Dogs", *American Journal of Physiology*, Vol.263, pp. F208-F213, 1992. (*dog, renal a., chronic*)
- 224A Mangino, M.J., Murphy, M.K., Grabau, G.G., Anderson, C.B., "Protective Effects of Glycine during Hypothermic Renal Ischemia Reperfusion Injury," *American Journal of Physiology*, Vol.261, p.F841-F848, 1991. (*dog, renal, acute*)

PIG

- 2814A Rosin D, Brasesco O, Varela J, Saber AA, You S, Rosenthal RJ, Cohn SM, "Low-pressure laparoscopy may ameliorate intracranial hypertension and renal hypoperfusion," *J Laparoendosc Adv Surg Tech A*, Vol. 2, No. 1, p. 15-9, 2002. (*pig, renal, acute*)
- 2583A Hvistendahl, J.J., Pedersen, T.S., Djurhuus, J.C., Pedersen, E.B., Frokiaer, J., "Losartan Attenuates Renal Vasoconstriction in Response to Acute Unilateral Ureteral Occlusion in Pigs," *Urology Research*, Vol. 30, Part 3, P. 169-77, July 2002. (*pig, renal a., acute*)
- 2499A Gudmundsson, F.F., Gislason, H.G., Myking, O.L., Viste, A., Grong, K., Svanes, K., "Hormonal changes related to reduced renal bloodflow and low urine output under prolonged increased intra-abdominal pressure in pigs," *Eur J Surg*, Vol. 168, No. 3, p. 178-86, 2002. (*pig, renal a., chronic*)
- 2442A Treggiari, M.M., Romand J.A, Burgener, D., Suter, P.M., Anemnan, A., "Effect of increasing norepinephrine dosage on regional blood flow in a porcine model of endotoxin shock," *Crit Care Med*, Vol. 30, No. 6, p. 1334-9, 2002.



Transonic Systems Inc.

Tel: 800-353-3569(USA); Fax 607- 257-7256; www.transonic.com
Europe: Tel: 31 43 407 7200; e-mail: info@transonic.nl; Fax: 3143 407 7201

E-4 Rev 9-05 page 4



Renal Arterial References

- (pig, renal a., portal v., acute)
- 2345A Launois, S.H., Averill, N., Abraham, J.H., Kirby, D.A., Weiss, J.W., "Cardiovascular responses to nonrespiratory and respiratory arousals in a porcine model," JAP, Vol. 90, No. 1, p. 114-120, 2001. (pig, renal a., iliac a., chronic)
- 2234A Sezai, A., Shiono, M., Orime, Y., Nakata, K., Hata, M., Iida, M., Kahiawazaki, S., Kinoshita, J., Nemoto, M., Kougima, T., Furuishi, M., Eda, K., Hirose, H., Yoshino, T., Saitoh, A., Taniguchi, T., Sezai, Y., "Major organ function under mechanical support: comparative studies of pulsatile and nonpulsatile circulation," Artif Organs, Vol. 23, No. 3, p. 280-5, 1999. (pig, renal a., carotid a., hepatic/portal, chronic)
- 2224A Oldner, A., Konrad, D., Weitzberg, E., Rudehill, A., Rossi, P., Wanecek, M., "Effects of levosimendan, a novel inotropic calcium-sensitizing drug, in experimental septic shock," Crit Care Med, Vol. 29, No. 11, p. 2185-93, 2001. (pig, renal a., portal v., acute)
- 2220A Cheung, P-Y, Barrington, K.J., Bigam, D., "The hemodynamic effects of dobutamine infusion in the chronically instrumented newborn piglet," Crit Care Med, Vol. 27, No. 3, p. 558-564, 1999. (neonatal pig, renal a., SMA, chronic)
- 2196A Burgener, D., Laesser, M., Treggiari-Venzi, M., Oi, Y., Jolliet, P., Strasser, S., Hadengue, A., Aneman, A., "Endothelin-1 blockade corrects mesenteric hypoperfusion in a porcine low cardiac output model," Crit Care Med, Vol. 29, No. 8, p. 1615-20, 2001. (pig, cardiac output, portal v., renal a., acute)
- 2167A Voelckel, W.G., Lindner, K.H., Wenzel, V., Bonatti, J., Hangler, H., Frimmel, C., Kunszberg, E., Lingnau, W., "Effects of vasopressin and epinephrine on splanchnic blood flow and renal function during and after cardiopulmonary resuscitation in pigs," Crit Care Med, Vol. 29, No. 4, p. 1083-8, 2000. (pig, SMA, renal a., hepatic v., chronic)
- 2141A Nilsson, A.B., Frieberg, P., "Acute renal responses to angiotensin-converting enzyme inhibition in the neonatal pig," Pediatric Nephrology, Vol. 14, No. 12, p. 1071-76, 2000. (neonatal pig, renal a., acute)
- 2071A Riddez, L., Johnson, L., Hahn, R.G., "Early hemodynamic changes during uncontrolled intra-abdominal bleeding," Eur Surg Res, Vol. 31, No. 1, p. 19-25, 1999. (pig, aorta, portal v., renal a., acute)
- 2070A Riddez, L., Johnson, L., Hahn, R.G., "Central and regional hemodynamics during crystallized fluid therapy after uncontrolled intra-abdominal bleeding," J Trauma, Vol. 44, No. 3, p. 433-9, 1998. (pig, aorta, portal v., renal a., acute)
- 2067A Glasgow, S.C., Shah, A.S., Noone, R.B., Gottfried, M.R., Eachempati, S.R., Talarico, T.L., Vaslef, S.N., "Comparison of various hemoglobin polyoxyethylene conjugate solutions as resuscitative fluids after hemorrhagic shock," J Trauma, Vol. 48, No. 5, p. 884-92, 2000. (pig, renal a., acute)
- 2011A Rasmussen, A., Skak, C., Kristensen, M., Ott, P., Kirkegaard, P., Secher, N.H., "Preserved arterial flow secures hepatic oxygenation during haemorrhage in the pig," J Physiol, Vol. 516, Pt. 2, p. 539-48, 1999. (pig, hepatic/portal, renal a., acute)
- 1953A Pastor, C.M., Morel, D.R., Clergue, F., Mentha, G., Morel, P., "Effects of abdominal CO₂ insufflation on renal and hepatic blood flows during acute hemorrhage in anesthetized pigs," Critical Care Medicine, Vol. 29, No. 5, p. 1017-22, 2001. (pig, hepatic/portal, renal a., acute)
- 1933A Noone, R.B., Mythen, M.G., Vaslef, S.N., "Effect of alpha (alpha)-cross-linked hemoglobin and pyridoxalated hemoglobin polyoxyethylene conjugate solutions on gastrointestinal regional perfusion in hemorrhagic shock," J Trauma, Vol. 45, No. 3, p. 457-69, 1998. (pig, renal a., acute)
- 1857A Riddez, L., Johnson, L., Hahn, R.G., "Early hemodynamic changes during uncontrolled intra-abdominal bleeding," Eur Surg Res, Vol. 31, No. 1, p. 19-25, 1999. (pig, renal a., aorta, portal v., acute)
- 1812A Mockel, M., Scheinert, D., Potapov, E.V., Wellenhofer, E., Combe, V., Nasser, B.A., Maier, D., Meyer, S., Yankah, C., Hetzer, R., Frei, U., Eckardt, K.U., "Continuous measurements of renal perfusion in pigs by means of intravascular Doppler," Kidney International, Vol. 59, No. 4, p. 1439-47, 2001. (pig, renal a., chronic)
- 1754A London, E.T., Ho, H.S., Neuhaus, A.M., Wolfe, B.M., Rudich, S.M., Perez, R.V., "Effect of intravascular volume expansion on renal function during prolonged CO₂ pneumoperitoneum," Ann Surg, Vol. 231, No. 2, p. 195-201, 2000. (pig, renal a., acute)
- 1434A Launois, SH, Abraham, JH, Weiss, JW, Kirby, DA, "Patterned cardiovascular responses to sleep and nonrespiratory arousals in a porcine model," J Appl Physiol 85: 1285-1291. (pig, renal a., iliac a., chronic)





Renal Arterial References

- 1220A Bigam, DL., Barrington, K.J., Jirsch, DW., Cheung, PY., "Effects of a Continuous Epinephrine Infusion on Regional Blood Flow in Awake Piglets." *Biology Neonate*, Vol. 73, No. 3, p. 198-206. 1998. (*piglet, renal, SMA, chronic*)
- 1148A Grundel, K., Bohm, B., Bauwens, K., Junghans, T., Scheiba, R., "Influence of acute hemorrhage and pneumoperitoneum on hemodynamic and respiratory parameters," *Surg Endosc*, Vol. 12, No. 6, p. 809-12, 1998. (*pig, renal a., acute*)
- 1107A Pearson, R.J., Barrington, K.J., Jirsch, D.W., Cheung, P.Y., "Dopaminergic Receptor-Mediated Effects in the Mesenteric Vasculature and Renal Vasculature of the Chronically Instrumented Newborn Piglet," *Critical Care Medicine*, Vol. 24, No. 10, p. 1706-1712, 1996. (*piglet, renal a., SMA, chronic*)
- 1093AH Bretan, P.N., Jr., Lobo, E., Chang, J.A., Dumitrescu, O., Miller, B., Yen, T.S., "Assessment of Preservation Induced Reperfusion Injury Via Intraoperative Renal Transplant Blood Flow and Endothelin Concentration Studies," *Journal of Urology*, Vol. 153, No. 3, Pt. 1, p. 714-718, 1997. (*pig, human, renal a., acute*)
- 922A Hess, J.R., MacDonald, V.W., Winslow, R.M., "Dehydration and Shock: An Animal Model of Hemorrhage and Resuscitation of Battlefield Injury," *Biomaterials, Artificial Cells & Immobilization Biotechnology*, Vol. 20, No 2-4, p. 499-502, 1992. (*pig, renal a., acute*)
- 869A Junghands, T., Bohm, B., Grundel, K., Schwenk, W., Muller, J.M., "Does Pneumoperitoneum with Different Gases, Body Positions, and Intraperitoneal Pressures Influence Renal and Hepatic Blood Flow?" *Surgery*, Vol. 121, p. 206-11, 1997. (*pig, renal a., hepatic a., acute*)
- 834A Kraus, T., Klar, E., Osswald, B.R., Fernandes, L., Mehrabi, A., Gebhard, M.M., Herfarth, C., "Continuous Measurement of Porcine Renal Cortex Microcirculation with Enhanced Thermal Diffusion Technology," *Journal of Surgical Research*, Vol. 62, No. 2, p. 531-536, 1996. (*pig, renal a., acute*)
- 824A Chiu, A.W., Chang, L.S., Birkett, D.H., Babayan, R.K., "A Porcine Model for Renal Hemodynamic Study during Laparoscopy," *Journal of Surgical Research*, Vol. 60, p. 61-68, 1996. (*pig, renal a. laparoscop, acute*)
- 710A Konishi, H., Yland, M.J., Brown, M., Yamazaki, K., Macha, M., Konishi, R., Kerrigan, J.P., Zhang, S., Randhawa, P.S., Antaki, J.F., Fuse, K., Kormos, R.L., "Effect of Pulsatility and Hemodynamic Power on Recovery of Renal Function," *ASAIO J.*, Vol. 42, No. 5, p. M720-M723, 1996. (*pig, renal a., acute*)
- 670A Akyureki, D.U., Gerig, L.H., Raaphorst, G.P., Tissue Preparation Technique for Microsphere Assays of Blood Flow," *Lab Animal Science* 1995, Vol. 45, No. 4, p. 415-419. (*pig, renal a., acute*)
- 641A Barrington, K.J., Sllen, R.G., Dewald, J.W., "Renal Vascular Effects of Epinephrine Infusion in the Halothane-Anesthetized Piglet," *Can J Pharmacol*, Vol. 72, p.394-396, 1994. (*piglet, renal a., acute*)
- 179A Sondeen J, Gonzaludo G, Loveday J, Deshon G, Clifford C, Hunt M, Rodkey WE, Wade C, "Renal Responses to Graded Hemorrhage in Conscious Pig", *American J Physiology*, Vol 259, p R119-25, 1990. (*pig, renal a., acute*)
- 173A Loick, H.M., Tokyay, R., Traber, D.L., Nichols, R.J., Herndon, D.L., "The Effect of Ketamine and Halothane on Splanchnic Circulation in Pig", *Anesthesiology*, Vol. 73, No. 3A, p. A607, 1990. (*pig, celiac, SMA, renal a., chronic*)
- 140A Gordon IL, Wesley R, Wong DH, Weir P, Porzio D, Watson T, Sadeghi M, Zaccari J, "Dopamine's Effect on Urine Production in Pigs Is Independent of Renal Blood Flow" accepted for publication in *Critical Care Medicine*, 1990. (*pig, renal a., acute*)
- 80A Paidas, C.N., Dudgeon, D., Haller, J.A., Clemens, M.G., "Adenosine Triphosphate (ATP) Treatment of Hypoxia. Comparison of Dose Dependence in Pulmonary and Renal Circulations," *Journal of Surgical Research*, Vol. 46, 1989. (*piglet, renal a., acute*)

RABBIT

- 2839A Denton KM, Lamden M, Shweta A, Alcorn D, Anderson WP, "Chronic angiotensin converting enzyme inhibition enhances renal vascular responsiveness to acetylcholine in anaesthetized rabbits," *J Hypertens*. 2001 Aug;19(8):1497-503. (*rabbit, renal a., chronic*)
- 2729A Correia AG, Denton KM, Evans RG., "Effects of activation of vasopressin-V1-receptors on regional kidney blood flow and glomerular arteriole diameters.," *J Hypertens*. 2001 Mar;19(3 Pt 2):649-57. (*rabbit, renal a., acute*)
- 2727A Montet X, Ivancevic MK, Belenger J, Jorge-Costa M, Pochon S, Pechere A, Terrier F, Vallee JP., "Noninvasive measurement of absolute renal perfusion by contrast medium-enhanced magnetic resonance imaging.," *Invest Radiol*. 2003 Sep;38(9):584-92. (*rabbit, renal a., acute*)



Transonic Systems Inc.

Tel: 800-353-3569(USA); Fax 607- 257-7256; www.transonic.com
Europe: Tel: 31 43 407 7200; e-mail: info@transonic.nl; Fax: 3143 407 7201

E-4 Rev 9-05 page 6



Renal Arterial References

- 2666A Rajapakse NW, Oliver JJ, Evans RG., "Nitric oxide in responses of regional kidney blood flow to vasoactive agents in anesthetized rabbits" *J Cardiovasc Pharmacol*, 40(2):210-9, 2002. (*rabbit, renal a., acute*)
- 2643A Kalyan, A., Eppel, G.A., Anderson, W.P., Oliver, J.J., Evans, R.G., "Renal medullary interstitial infusion is a flawed technique for examining vasodilator mechanisms in anesthetized rabbits," *J Pharmacol Toxicol Methods*, Vol. 47, No. 3, p. 153-9, 2002. (*rabbit, renal a., acute*)
- 2634A Eppel, G.A., Bergstrom, G., Anderson, W.P., Evans, R.G., "Autoregulation of renal medullary blood flow in rabbits," *AJP*, Vol. 284, No. 1, p. R233-44, 2003. (*rabbit, renal a., acute*)
- 2633A Clow, K.A., Giraud, G.D., Ogden, B.E., Brooks, V.L., "Pregnancy alters hemodynamic responses to hemorrhage in conscious rabbits," *AJP*, Vol. 284, No. 4, p. H1110-8, 2003. (*rabbit, mesenteric a., renal a., terminal aorta, chronic*)
- 2620A Guild, S.J., Eppel, G.A., Malpas, S.C., Rajapakse, N.W., Stewart, A., Evans, R.G., "Regional responsiveness of renal perfusion to activation of the renal nerves," *AJP*, Vol. 283, No. 5, p. R1177-86, 2002. (*rabbit, renal a., acute*)
- 2582A Oliver, J.J., Rajapakse, N.W., Evans, R.G., "Effects of Indomethacin on Responses of Regional Kidney Perfusion to Vasoactive Agents in Rabbits." *Clinical Experimental Pharmacology Physiology*, Vol. 29, Part 10, p. 873-9, Oct. 2002. (*rabbit, renal, acute*)
- 2327A Ramchandra, R., Barrett, C.J., Guild, S.J., Malpas, S.C., "Is the chronically denervated kidney supersensitive to catecholamines?" *AJP*, Vol 282, No. 2, p. R603-10, 2002. (*rabbit, renal a., acute*)
- 2059A Guild, S.J., Austin, P.C., Navakatikyan, M., Ringwood, J.V., Malpas, S.C., "Dynamic relationship between sympathetic nerve activity and renal blood flow: a frequency domain approach," *AJP*, Vol. 281, No. 1, p. R206-212, 2001. (*rabbit, renal a., acute*)
- 1984A Barrett, C.J., Navakatikyan, M.A., Malpas, S.C., "Long-term control of renal blood flow: what is the role of the renal nerves?" *AJP*, Vol. 280, No. 5, p. R1534-45, 2001. (*rabbit, renal a., acute*)
- 1862A Weekes, S.R., Madden, A.C., Bergstrom, G., Anderson, W.P., Evans, R.G., "Effects of renal arterial endothelin-1 and endogenous endothelins on regional kidney blood flow and renal antihypertensive mechanisms in anesthetized rabbits," *Kidney Blood Press Res*, Vol. 23, No. 6, p. 366-375, 2000. (*rabbit, renal a., acute*)
- 1849A Leonard, B.L., Navakatikyan, M.A., Malpas, S.C., "Differential regulation of the oscillations in sympathetic nerve activity and renal blood flow following volume expansion," *Auton Neurosci*, Vol. 83, No. 1-2, p. 19-28, 2000. (*rabbit, renal a., acute*)
- 1848A Navakatikyan, M.A., Leonard, B.L., Evans, R.G., Malpas, S.C., "Modelling the neural control of intrarenal blood flow," *Clin Exp Pharmacol Physiol*, Vol. 27, No. 9, p. 650-2, 2000. (*rabbit, renal a., acute*)
- 1846A Leonard, B.L., Evans, R.G., Navakatikyan, M.A., Malpas, S.C., "Differential neural control of intrarenal blood flow," *AJP*, Vol. 279, No. 3, p. R907-916, 2000. (*rabbit, renal a., acute*)
- 1824A Evans, R.G., Correia, A.G., Weekes, S.R., Madden, A.C., "Responses of regional kidney perfusion to vasoconstrictors in anesthetized rabbits: dependence on agent and renal artery pressure," *Clin Exp Pharmacol Physiol*, Vol. 27, No. 12, p. 1007-12, 2000. (*rabbit, renal a., acute*)
- 1750A Evans, R.G., Madden, A.C., Denton, K.M., "Diversity of responses of renal cortical and medullary blood flow to vasoconstrictors in conscious rabbits," *Acta Physiol Scand*, Vol. 169, No. 4, p. 297-308, 2000. (*rabbit, renal a., asc, aorta, chronic*)
- 1632A Malpas, S.C., Hore, T.A., Navakatikyan, M., Lukoshkova, E.V., Nguang, S.K., Austin, P.C., "Resonance in the Renal Vasculature Evoked by Activation of the Sympathetic Nerves," *American Journal of Physiology*, Vol. 276, No. 5, p. R1311-1319, 1999. (*rabbit, renal a., acute*)
- 1573A Tublin, M.E., Tessler, F.N., Murphy, M.E., "Correlation between Renal Vascular Resistance, Pulse Pressure, and the Resistive Index in Isolated Perfused Rabbit Kidneys," *Radiology*, Vol. 213, No. 1, p. 258-264. (*rabbit, renal a. cannula*)
- 1560A Correia, A.G., Bergstrom, G., Lawrence, A.J., Evans, R.G., "Renal Medullary Interstitial Infusion of Norepinephrine in Anesthetized Rabbits: Methodological Considerations," *American Journal of Physiology*, Vol. 277, No. 1, p. R112-R122, 1999. (*rabbit, renal a., acute*)
- 1543A Correia, A.G., Madden, A.C., Bergstrom, G., Evans, R.G., "Effects of Renal Medullary and Intravenous Norepinephrine on Renal Antihypertensive Function," *Hypertension*, Vol. 35, No. 4, p. 965-970, 2000. (*rabbit, renal a., acute*)





Renal Arterial References

- 1530A Brooks, V.L., Kane, C.M., Welch, L.S., "Regional Conductance Changes during Hemorrhage in Pregnant and Nonpregnant Conscious Rabbits," *Amer. Journal of Physiology*, Vol. 277, No. 3 Pt 1, p. 675-681m 1999. (*rabbit, renal a., mesenteric a., terminal aorta, chronic*)
- 1451A Mueller, P.J., O'Hagan, K.P., Skogg, K.A., Buckwalter, J.B., Clifford, P.S. "Renal hemodynamic responses to dynamic exercise in rabbits." *JAP*, Vol. 85, p. 1605-14, 1998. (*rabbit, renal a., chronic*)
- 1178A Regional Blood Flow Effects of Dopexamine versus Enalaprilat during Propofol Anaesthesia in Rabbits With Experimental Chronic Heart Failure. Blake, D.W., Way, D., Trigg, L., McGrath, B.P., *Cardiovascular Research*, Vol. 28, No. 5, p. 710-714, May 1994. (*rabbit, renal a., asc. aorta, acute*)
- 1135A Tomoda, F., Lew, R.A., Smith, A.I., Madden, A.C., Evans, R.G., "Role of Bradykinin Receptors in the Renal Effects of Inhibition of Angiotensin Converting Enzyme and Endopeptidases 24.11 and 24.12 in Conscious Rabbits," *British Journal of Pharmacology*, Vol. 119, No. 2, p. 365-373, 1996. (*rabbit, renal a., chronic*)
- 1119A Hjelmqvist H., Keil, R., Mathai, M., Hubschle, T., Gerstberger, R., "Vasodilation and Glomerular Binding of Adrenomedullin in Rabbit Kidney are Not CGRP Receptor Mediated," *American Journal of Physiology*, Vol. 273, No. 2, Pt. 2 R716-R724, 1997. (*rabbit, renal a., chronic*)
- 93A Brown, G.P., Venuto, R.C., "Measurement of Renal Blood Flow of Conscious Rabbits Utilizing Ultrasonic Flowprobes: The Effect of Cyclooxygenase Inhibition", *Clinical Research*, Vol. 37, No.4, p.950A, 1989. July, 1989. (*rabbit, renal a., chronic*)

SHEEP

- 2804A Sener A, Smith FG, "Dose-dependent effects of nitric oxide synthase inhibition on systemic and renal hemodynamics in conscious lambs," *Can J Physiol Pharmacol*, Vol. 77, No. 1, p. 1-7, 1999. (*lamb, renal a., chronic*)
- 2724A Di Giantomasso D, Morimatsu H, May CN, Bellomo R., "Intrarenal blood flow distribution in hyperdynamic septic shock: Effect of norepinephrine," *Crit Care Med*. 2003 Oct;31(10):2509-13. (*sheep, renal a., acute*)
- 2612A Sener, A., Smith, F.G., "Glomerular and tubular responses to N(G)-nitro-L-arginine methyl ester are age dependent in conscious lambs," *AJP*, Vol. 282, No. 5, p. R1512-20, 2002. (*lamb, renal a., chronic*)
- 2337A Sener, A., Smith, F.G., "Renal hemodynamic effects of L-NAME during postnatal maturation in conscious lambs," *Pediatr Nephrol*, Vol. 16, No. 11, p. 868-73, 2001. (*lamb, renal a., chronic*)
- 2335A Joyce, J.M., Phernetton, T.M., Shaw, C.E., Modrick, M.L., Magness, R.R., "Endothelial vasodilator production by uterine and systemic arteries. IX. eNOS gradients in cycling and pregnant ewes," *AJP*, Vol. 282, No. 1, p. H342-8, 2002. (*sheep, renal a., uterine a., chronic*)
- 2222A Ullman, J., Eriksson, S., Rundgren, M., "Losartan increases renal blood flow during isoflurane anesthesia in sheep," *Acta Anaesthesiol Scand*, Vol. 45, No. 9, p. 1168-75, 2001. (*sheep, renal a., femoral a., acute*)
- 1816A Ullman, J., Eriksson, S., Rundgren, M., "Effects of losartan, prazosin and a vasopressing V1-receptor antagonist on renal and femoral blood flow in conscious sheep," *Acta Physiol Scand*, Vol. 171, No. 1, p. 99-104, 2001. (*sheep, renal a., femoral a., chronic*)
- 1620A de Matteo, R., May, C.N., "Inhibition of Prostaglandin and Nitric Oxide Synthesis Prevents Cortisol-Induced Renal Vasodilatation in Sheep," Vol. 276, No. 4, p. R1125-R1131, 1999. (*sheep, renal a., chronic*)
- 1520A Greenberg, S.G., Clark, K.E., "Hemodynamic Effects of Platelet-Activating Factor in Nonpregnant and Pregnant Sheep," *Amer. Journal of Physiology*, Vol. 277, No. 4 Pt. 2, R996-R1001, 1999. (*sheep, renal a., uterine a., chronic*)
- 1446A Sener, A., Smith, F.G. "Acetylcholine chloride and renal hemodynamics during postnatal maturation in conscious lambs." *J Appl Physiol*. 87(4): 1296-1300, 1999. (*lamb, renal a., chronic*)
- 1391A Smith, F.G., Abu-Amarah, I., "Renal denervation alters cardiovascular and endocrine responses to hemorrhage in conscious newborn lambs," *AJP*, Vol. 275, No. 1Pt2, p. H285-291, 1998. (*lamb, renal a., chronic*)
- 1325A Greenberg, S.G., Baker, R.S., Yang, D., Clark, K.E. "Effects of continuous infusion of endothelin-1 in pregnant sheep." *Hypertension* 1997 Dec;30(6):1585-90. (*sheep, renal a., uterine a., chronic*)

