

Reference:

- 1 Yoshioka S, Nishino H, Shiraki T, Ikeda K, Koike H, Okuno A, Wada M, Fujiwara T, Horikoshi H: Antihypertensive effects of cs-045 treatment in obese zucker rats. *Metabolism* 1993;42:75-80.
- 2 Buchanan TA, Meehan WP, Jeng YY, Yang D, Chan TM, Nadler JL, Scott S, Rude RK, Hsueh WA: Blood pressure lowering by pioglitazone. Evidence for a direct vascular effect. *J Clin Invest* 1995;96:354-360.
- 3 Fujii M, Takemura R, Yamaguchi M, Hasegawa G, Shigeta H, Nakano K, Kondo M: Troglitazone (cs-045) ameliorates albuminuria in streptozotocin-induced diabetic rats. *Metabolism* 1997;46:981-983.
- 4 Yoshimoto T, Naruse M, Nishikawa M, Naruse K, Tanabe A, Seki T, Imaki T, Demura R, Aikawa E, Demura H: Antihypertensive and vasculo- and renoprotective effects of pioglitazone in genetically obese diabetic rats. *Am J Physiol* 1997;272:E989-996.
- 5 Uchida A, Nakata T, Hatta T, Kiyama M, Kawa T, Morimoto S, Miki S, Moriguchi J, Nakamura K, Fujita H, Itoh H, Sasaki S, Takeda K, Nakagawa M: Reduction of insulin resistance attenuates the development of hypertension in sucrose-fed shr. *Life Sci* 1997;61:455-464.
- 6 Buckingham RE, Al-Barazanji KA, Toseland CD, Slaughter M, Connor SC, West A, Bond B, Turner NC, Clapham JC: Peroxisome proliferator-activated receptor-gamma agonist, rosiglitazone, protects against nephropathy and pancreatic islet abnormalities in zucker fatty rats. *Diabetes* 1998;47:1326-1334.
- 7 Fujiwara K, Hayashi K, Ozawa Y, Tokuyama H, Nakamura A, Saruta T: Renal protective effect of troglitazone in wistar fatty rats. *Metabolism* 2000;49:1361-1364.
- 8 Isshiki K, Haneda M, Koya D, Maeda S, Sugimoto T, Kikkawa R: Thiazolidinedione compounds ameliorate glomerular dysfunction independent of their insulin-sensitizing action in diabetic rats. *Diabetes* 2000;49:1022-1032.
- 9 Nicholas SB, Kawano Y, Wakino S, Collins AR, Hsueh WA: Expression and function of peroxisome proliferator-activated receptor-gamma in mesangial cells. *Hypertension* 2001;37:722-727.
- 10 Yoshida K, Kohzuki M, Xu HL, Wu XM, Kamimoto M, Sato T: Effects of troglitazone and temocapril in spontaneously hypertensive rats with chronic renal failure. *J Hypertens* 2001;19:503-510.
- 11 Ma LJ, Marcantoni C, Linton MF, Fazio S, Fogo AB: Peroxisome proliferator-activated receptor-gamma agonist troglitazone protects against nondiabetic glomerulosclerosis in rats. *Kidney Int* 2001;59:1899-1910.
- 12 Yamashita H, Nagai Y, Takamura T, Nohara E, Kobayashi K: Thiazolidinedione derivatives ameliorate albuminuria in streptozotocin-induced diabetic spontaneous hypertensive rat. *Metabolism* 2002;51:403-408.
- 13 Diep QN, El Mabrouk M, Cohn JS, Endemann D, Amiri F, Viridis A, Neves MF, Schiffrin EL: Structure, endothelial function, cell growth, and inflammation in blood vessels of angiotensin ii-infused rats: Role of peroxisome proliferator-activated receptor-gamma. *Circulation* 2002;105:2296-2302.
- 14 Baylis C, Atzpodien EA, Freshour G, Engels K: Peroxisome proliferator-activated receptor [gamma] agonist provides superior renal protection versus angiotensin-converting enzyme inhibition in a rat model of type 2 diabetes with obesity. *J Pharmacol Exp Ther* 2003;307:854-860.
- 15 Tanimoto M, Fan Q, Gohda T, Shike T, Makita Y, Tomino Y: Effect of pioglitazone on the early stage of type 2 diabetic nephropathy in kk/ta mice. *Metabolism* 2004;53:1473-1479.
- 16 Dobrian AD, Schriver SD, Khraibi AA, Prewitt RL: Pioglitazone prevents hypertension and

reduces oxidative stress in diet-induced obesity. *Hypertension* 2004;43:48-56.

17 Khan O, Riazi S, Hu X, Song J, Wade JB, Ecelbarger CA: Regulation of the renal thiazide-sensitive na-cl cotransporter, blood pressure, and natriuresis in obese zucker rats treated with rosiglitazone. *Am J Physiol Renal Physiol* 2005;289:F442-450.

18 Yang HC, Ma LJ, Ma J, Fogo AB: Peroxisome proliferator-activated receptor-gamma agonist is protective in podocyte injury-associated sclerosis. *Kidney Int* 2006;69:1756-1764.

19 Benigni A, Zoja C, Tomasoni S, Campana M, Corna D, Zanchi C, Gagliardini E, Garofano E, Rottoli D, Ito T, Remuzzi G: Transcriptional regulation of nephrin gene by peroxisome proliferator-activated receptor-gamma agonist: Molecular mechanism of the antiproteinuric effect of pioglitazone. *J Am Soc Nephrol* 2006;17:1624-1632.

20 Ohga S, Shikata K, Yozai K, Okada S, Ogawa D, Usui H, Wada J, Shikata Y, Makino H: Thiazolidinedione ameliorates renal injury in experimental diabetic rats through anti-inflammatory effects mediated by inhibition of nf-kappab activation. *Am J Physiol Renal Physiol* 2007;292:F1141-1150.

21 Ohtomo S, Izuhara Y, Takizawa S, Yamada N, Kakuta T, van Ypersele de Strihou C, Miyata T: Thiazolidinediones provide better renoprotection than insulin in an obese, hypertensive type ii diabetic rat model. *Kidney Int* 2007;72:1512-1519.

22 Doi S, Masaki T, Arakawa T, Takahashi S, Kawai T, Nakashima A, Naito T, Kohno N, Yorioka N: Protective effects of peroxisome proliferator-activated receptor gamma ligand on apoptosis and hepatocyte growth factor induction in renal ischemia-reperfusion injury. *Transplantation* 2007;84:207-213.

23 Omasu F, Oda T, Yamada M, Yoshizawa N, Yamakami K, Sakurai Y, Miura S: Effects of pioglitazone and candesartan on renal fibrosis and the intrarenal plasmin cascade in spontaneously hypercholesterolemic rats. *Am J Physiol Renal Physiol* 2007;293:F1292-1298.

24 Namikoshi T, Satoh M, Tomita N, Haruna Y, Kobayashi S, Komai N, Sasaki T, Kashihara N: Pioglitazone ameliorates endothelial dysfunction in obese rats with nephropathy. *Biochem Biophys Res Commun* 2007;361:835-840.

25 Westerweel PE, den Ouden K, Nguyen TQ, Goldschmeding R, Joles JA, Verhaar MC: Amelioration of anti-thy1-glomerulonephritis by ppar-gamma agonism without increase of endothelial progenitor cell homing. *Am J Physiol Renal Physiol* 2008;294:F379-384.

26 Ko GJ, Kang YS, Han SY, Lee MH, Song HK, Han KH, Kim HK, Han JY, Cha DR: Pioglitazone attenuates diabetic nephropathy through an anti-inflammatory mechanism in type 2 diabetic rats. *Nephrol Dial Transplant* 2008;23:2750-2760.

27 Namikoshi T, Tomita N, Satoh M, Haruna Y, Kobayashi S, Komai N, Sasaki T, Kashihara N: Pioglitazone enhances the antihypertensive and renoprotective effects of candesartan in zucker obese rats fed a high-protein diet. *Hypertens Res* 2008;31:745-755.

28 Sen U, Rodriguez WE, Tyagi N, Kumar M, Kundu S, Tyagi SC: Ciglitazone, a ppar-gamma agonist, ameliorates diabetic nephropathy in part through homocysteine clearance. *Am J Physiol Endocrinol Metab* 2008;295:E1205-1212.

29 Kawai T, Masaki T, Doi S, Arakawa T, Yokoyama Y, Doi T, Kohno N, Yorioka N: Ppar-gamma agonist attenuates renal interstitial fibrosis and inflammation through reduction of tgf-beta. *Lab Invest* 2009;89:47-58.

30 Sironi AM, Vichi S, Gastaldelli A, Pecori N, Anichini R, Foot E, Seghieri G, Ferrannini E: Effects of troglitazone on insulin action and cardiovascular risk factors in patients with non-insulin-

dependent diabetes. *Clin Pharmacol Ther* 1997;62:194-202.

31 Imano E, Kanda T, Nakatani Y, Nishida T, Arai K, Motomura M, Kajimoto Y, Yamasaki Y, Hori M: Effect of troglitazone on microalbuminuria in patients with incipient diabetic nephropathy. *Diabetes Care* 1998;21:2135-2139.

32 Nakamura T, Ushiyama C, Shimada N, Hayashi K, Ebihara I, Koide H: Comparative effects of pioglitazone, glibenclamide, and voglibose on urinary endothelin-1 and albumin excretion in diabetes patients. *J Diabetes Complications* 2000;14:250-254.

33 Lebovitz HE, Dole JF, Patwardhan R, Rappaport EB, Freed MI: Rosiglitazone monotherapy is effective in patients with type 2 diabetes. *J Clin Endocrinol Metab* 2001;86:280-288.

34 Nakamura T, Ushiyama C, Suzuki S, Shimada N, Sekizuka K, Ebihara L, Koide H: Effect of troglitazone on urinary albumin excretion and serum type iv collagen concentrations in type 2 diabetic patients with microalbuminuria or macroalbuminuria. *Diabet Med* 2001;18:308-313.

35 Nakamura T, Ushiyama C, Osada S, Hara M, Shimada N, Koide H: Pioglitazone reduces urinary podocyte excretion in type 2 diabetes patients with microalbuminuria. *Metabolism* 2001;50:1193-1196.

36 Bakris G, Viberti G, Weston WM, Heise M, Porter LE, Freed MI: Rosiglitazone reduces urinary albumin excretion in type ii diabetes. *J Hum Hypertens* 2003;17:7-12.

37 Aljabri K, Kozak SE, Thompson DM: Addition of pioglitazone or bedtime insulin to maximal doses of sulfonylurea and metformin in type 2 diabetes patients with poor glucose control: A prospective, randomized trial. *Am J Med* 2004;116:230-235.

38 Yanagawa T, Araki A, Sasamoto K, Shirabe S, Yamanouchi T: Effect of antidiabetic medications on microalbuminuria in patients with type 2 diabetes. *Metabolism* 2004;53:353-357.

39 Hanefeld M, Brunetti P, Schernthaner GH, Matthews DR, Charbonnel BH: One-year glycemic control with a sulfonylurea plus pioglitazone versus a sulfonylurea plus metformin in patients with type 2 diabetes. *Diabetes Care* 2004;27:141-147.

40 Schernthaner G, Matthews DR, Charbonnel B, Hanefeld M, Brunetti P: Efficacy and safety of pioglitazone versus metformin in patients with type 2 diabetes mellitus: A double-blind, randomized trial. *J Clin Endocrinol Metab* 2004;89:6068-6076.

41 Matthews DR, Charbonnel BH, Hanefeld M, Brunetti P, Schernthaner G: Long-term therapy with addition of pioglitazone to metformin compared with the addition of gliclazide to metformin in patients with type 2 diabetes: A randomized, comparative study. *Diabetes Metab Res Rev* 2005;21:167-174.

42 Agarwal R, Saha C, Battiwala M, Vasavada N, Curley T, Chase SD, Sachs N, Semret MH: A pilot randomized controlled trial of renal protection with pioglitazone in diabetic nephropathy. *Kidney Int* 2005;68:285-292.

43 Pistrosch F, Herbrig K, Kindel B, Passauer J, Fischer S, Gross P: Rosiglitazone improves glomerular hyperfiltration, renal endothelial dysfunction, and microalbuminuria of incipient diabetic nephropathy in patients. *Diabetes* 2005;54:2206-2211.

44 Sarafidis PA, Lasaridis AN, Nilsson PM, Hitoglou-Makedou AD, Pagkalos EM, Yovos JG, Pliakos CI, Tourkantonis AA: The effect of rosiglitazone on urine albumin excretion in patients with type 2 diabetes mellitus and hypertension. *Am J Hypertens* 2005;18:227-234.

45 Mohideen P, Bornemann M, Sugihara J, Genadio V, Sugihara V, Arakaki R: The metabolic effects of troglitazone in patients with diabetes and end-stage renal disease. *Endocrine* 2005;28:181-186.

- 46 Bakris GL, Ruilope LM, McMorn SO, Weston WM, Heise MA, Freed MI, Porter LE: Rosiglitazone reduces microalbuminuria and blood pressure independently of glycemia in type 2 diabetes patients with microalbuminuria. *J Hypertens* 2006;24:2047-2055.
- 47 Miyazaki Y, Cersosimo E, Triplitt C, DeFronzo RA: Rosiglitazone decreases albuminuria in type 2 diabetic patients. *Kidney Int* 2007;72:1367-1373.
- 48 Jin HM, Pan Y: Renoprotection provided by losartan in combination with pioglitazone is superior to renoprotection provided by losartan alone in patients with type 2 diabetic nephropathy. *Kidney Blood Press Res* 2007;30:203-211.
- 49 Kincaid-Smith P, Fairley KF, Farish S, Best JD, Proietto J: Reduction of proteinuria by rosiglitazone in non-diabetic renal disease. *Nephrology (Carlton)* 2008;13:58-62.