

## BIBLIOGRAPHY

- Amorim, R.G., Guedes, G. da S., Vasconcelos, S.M.L., Santos, J.C. de F. 2019. Kidney disease in diabetes mellitus: cross-linking between hyperglycemia, redox imbalance and inflammation. *Arquivos Brasileiros de Cardiologia* 112, 577–587.
- Atawia, R.T., Bunch, K.L., Toque, H.A., Caldwell, R.B., Caldwell, R.W. 2019. Mechanisms of obesity-induced metabolic and vascular dysfunctions. *Frontiers in Bioscience (Landmark Edition)* 24, 890–934.
- Barton, M., Carmona, R., Morawietz, H., d’Uscio, L.V., Goettsch, W., Hillen, H., Haudenschild, *et al.* 2000. Obesity is associated with tissue-specific activation of renal angiotensin-converting enzyme in vivo: evidence for a regulatory role of endothelin. *Hypertension* 35, 329–336.
- Boden, G. 2008. Obesity and free fatty acids (ffa). *Endocrinology and Metabolism Clinics of North America* 37, 635–ix.
- Campia, U., Tesauro, M., Di Daniele, N., Cardillo, C. 2014. The vascular endothelin system in obesity and type 2 diabetes: pathophysiology and therapeutic implications. *Life Sciences* 118, 149–155.
- Chen, X., Andresen, B.T., Hill, M., Zhang, J., Booth, F., Zhang, C. 2008. Role of reactive oxygen species in tumor necrosis factor- $\alpha$  induced endothelial dysfunction. *Current Hypertension Reviews* 4, 245–255.
- Cheng, H., Harris, R.C. 2014. Renal endothelial dysfunction in diabetic nephropathy. *Cardiovascular & Hematological Disorders Drug Targets* 14, 22–33.
- Davenport, A.P., Hyndman, K.A., Dhaun, N., Southan, C., Kohan, D.E., Pollock, J.S., *et al.* 2016. Endothelin. *Pharmacological Reviews* 68, 357–418.
- Divella, R., De Luca, R., Abbate, I., Naglieri, E., Daniele, A. 2016. Obesity and cancer: the role of adipose tissue and adipo-cytokines-induced chronic inflammation. *Journal of Cancer* 7, 2346–2359.
- Duni, A., Liakopoulos, V., Roumeliotis, S., Peschos, D., Dounousi, E. 2019. Oxidative stress in the pathogenesis and evolution of chronic kidney disease: untangling ariadne’s thread. *International Journal of Molecular Sciences* 20, 3711.
- Fogo, A.B. 2007. Mechanisms of progression of chronic kidney disease. *Pediatric Nephrology* 22, 2011–2022.
- Fogo, A.B. 2015. Causes and pathogenesis of focal segmental glomerulosclerosis. *Nature Reviews Nephrology* 11, 76–87.
- Förstermann Ulrich, Münzel Thomas. 2006. Endothelial nitric oxide synthase in vascular disease. *Circulation* 113, 1708–1714.
- Förstermann, U., Li, H. 2011. Therapeutic effect of enhancing endothelial nitric oxide synthase (eNOS) expression and preventing eNOS uncoupling. *British Journal of Pharmacology* 164, 213.
- Gai, Z., Wang, T., Visentin, M., Kullak-Ublick, G.A., Fu, X., Wang, Z. 2019. Lipid accumulation and chronic kidney disease. *Nutrients* 11.
- Guan, Z., VanBeusecum, J.P., Inscho, E.W. 2015. Endothelin and the renal vasculature. *Seminars in Nephrology* 35, 145–155.
- Gui, T., Sun, Y., Shimokado, A., Muragaki, Y. 2012. The roles of mitogen-activated protein kinase pathways in  $\text{tgf-}\beta$ -induced epithelial-mesenchymal transition. *Journal of Signal Transduction*.

- Hall, J., Juncos, L., Wang, Z., Hall, M., do Carmo, J., da Silva, A. 2014. Obesity, hypertension, and chronic kidney disease. *International Journal of Nephrology and Renovascular Disease* 75.
- Hartopo, A.B., Arfian, N., Nakayama, K., Suzuki, Y., Yagi, K., Emoto, N. 2018. Endothelial-derived endothelin-1 promotes pulmonary vascular remodeling in bleomycin-induced pulmonary fibrosis. *Physiological Research* S185–S197.
- Herningtyas, E.H., Ng, T.S. 2019. Prevalence and distribution of metabolic syndrome and its components among provinces and ethnic groups in Indonesia. *BioMed Central Public Health* 19, 377.
- Hochoer, B., Thöne-Reineke, C., Rohmeiss, P., Schmager, F., Slowinski, T., Burst, *et al.* 1997. Endothelin-1 transgenic mice develop glomerulosclerosis, interstitial fibrosis, and renal cysts but not hypertension. *Journal of Clinical Investigation* 99, 1380–1389.
- Hruby, A., Hu, F.B. 2015. The epidemiology of obesity: a big picture. *Pharmacoeconomics* 33, 673–689.
- Huang, J., Rajapakse, A., Xiong, Y., Montani, J.-P., Verrey, F., Ming, X.-F., *et al.* 2016. Genetic targeting of arginase-II in mouse prevents renal oxidative stress and Inflammation in diet-induced obesity. *Frontiers in Physiology* 7.
- Hunley, T.E., Ma, L.-J., Kon, V. 2010. Scope and mechanisms of obesity-related renal disease. *Current Opinion in Nephrology and Hypertension* 19, 227–234.
- Hunter, C.J., De Plaen, I.G. 2014. Inflammatory signaling in nec: role of nfkb and cytokines. *Pathophysiology : The Official Journal of The International Society for Pathophysiology* 21, 55–65.
- Hwang, D.H., Kim, J.-A., Lee, J.Y. 2016. Mechanisms for the activation of toll-like receptor 2/4 by saturated fatty acids and inhibition by docosahexaenoic acid. *European Journal of Pharmacology* 785, 24–35.
- Ito, H., Hirata, Y., Adachi, S., Tanaka, M., Tsujino, M., Koike, *et al.* 1993. Endothelin-1 is an autocrine/paracrine factor in the mechanism of angiotensin II-induced hypertrophy in cultured rat cardiomyocytes. *Journal of Clinical Investigation* 92, 398–403.
- Jiang, T., Wang, Z., Proctor, G., Moskowitz, S., Liebman, S.E., Rogers, *et al.* 2005. Diet-induced obesity in c57bl/6j mice causes increased renal lipid accumulation and glomerulosclerosis via a sterol regulatory element-binding protein-1c-dependent pathway. *Journal of Biological Chemistry* 280, 32317–32325.
- Kfoury, H. 2014. Epithelial cell foot process effacement in podocytes in focal and segmental glomerulosclerosis: a quantitative analysis. *Ultrastructural Pathology* 38, 303–308.
- Kim, J., Montagnani, M., Chandrasekran, S., Quon, M.J. 2012. Role of lipotoxicity in endothelial dysfunction. *Heart Failure Clinics* 8, 589–607.
- Kohan, D.E., Barton, M. 2014. Endothelin and endothelin antagonists in chronic kidney disease. *Kidney International* 86, 896–904.
- Kohan, D.E., Inscho, E.W., Wesson, D., Pollock, D.M. 2011. Physiology of endothelin and the kidney. *Comprehensive Physiology* 1, 883–919.
- Kwon, H., Pessin, J.E. 2013. Adipokines mediate inflammation and insulin resistance. *Frontiers in Endocrinology* 4.

- Laurentius, T., Raffetseder, U., Fellner, C., Kob, R., Nourbakhsh, M., Floege, *et al.* 2019. High-fat diet-induced obesity causes an inflammatory microenvironment in the kidneys of aging Long-Evans rats. *Journal of Inflammation* 16, 14.
- Lee, H.S., Song, C.Y. 2010. Effects of  $\text{tgf-}\beta$  on podocyte growth and disease progression in proliferative podocytopathies. *Kidney and Blood Presures Research* 33, 24–29.
- Lee, J., Lee, S., Zhang, H., Hill, M.A., Zhang, C., Park, Y. 2017. Interaction of  $\text{il-6}$  and  $\text{tnf-}\alpha$  contributes to endothelial dysfunction in type 2 diabetic mouse hearts. *Public Library of Science One* 12, e0187189.
- Lerman, L.O., Lerman, A. 2011. The metabolic syndrome and early kidney disease: another link in the chain?. *Revista Española de Cardiología (English Edition)* 64, 358–360.
- Liu, T., Zhang, L., Joo, D., Sun, S.-C. 2017.  $\text{Nf-}\kappa\text{b}$  signaling in inflammation. *Signal Transduction and Targeted Therapy* 2, 1–9.
- Luyckx, V.A., Tuttle, K.R., Garcia-Garcia, G., Gharbi, M.B., Heerspink, H.J.L., Johnson, D.W., *et al.* 2017. Reducing major risk factors for chronic kidney disease. *Kidney International Supplements* 7, 71–87.
- Meng, X.-M., Tang, P.M.-K., Li, J., Lan, H.Y. 2015.  $\text{Tgf-}\beta/\text{smad}$  signaling in renal fibrosis. *Frontiers in Physiology* 6.
- Montané, B., Abitbol, C., Chandar, J., Strauss, J., Zilleruelo, G. 2003. Novel therapy of focal glomerulosclerosis with mycophenolate and angiotensin blockade. *Pediatric Nephrology* 18, 772–777.
- Moore, K.L., Dalley, A.F., Agur, A.M.R. 2010. *Clinically oriented anatomy, 6th ed.* Wolters Kluwer/Lippincott Williams & Wilkins, Philadelphia.
- Muller, C.R., Leite, A.P.O., Yokota, R., Pereira, R.O., Americo, A.L.V., Nascimento, N.R.F., *et al.* 2019. Post-weaning exposure to high-fat diet induces kidney lipid accumulation and function impairment in adult rats. *Frontiers in Nutrition* 6.
- Muniyappa, R., Iantorno, M., Quon, M.J. 2008. An integrated view of insulin resistance and endothelial dysfunction. *Endocrinology and Metabolism Clinics of North America* 37, 685.
- Nakayama, T., Sato, W., Kosugi, T., Zhang, L., Campbell-Thompson, M., Yoshimura, A., *et al.* 2009. Endothelial injury due to eNOS deficiency accelerates the progression of chronic renal disease in the mouse. *American Journal of Physiology: Renal Physiology* 296, F317–F327.
- Nishi, H., Higashihara, T., Inagi, R. 2019. Lipotoxicity in kidney, heart, and skeletal muscle dysfunction. *Nutrients* 11.
- Patrakka, J., Tryggvason, K. 2009. New insights into the role of podocytes in proteinuria. *Nature Reviews Nephrology* 5, 463–468.
- Picchi, A., Gao, X., Belmadani, S., Potter, B.J., Focardi, M., Chilian, W.M., *et al.* 2006. Tumor necrosis factor- $\alpha$  induces endothelial dysfunction in the prediabetic metabolic syndrome. *Circulation Research* 99, 69–77.
- Rhee, C.M., Ahmadi, S.-F., Kalantar-Zadeh, K. 2016. The dual roles of obesity in chronic kidney disease: a review of the current literature. *Current Opinion in Nephrology and Hypertension* 25, 208–216.

- Ross, B., D'Orléans-Juste, P., Giaid, A. 2010. Potential role of endothelin-1 in pulmonary fibrosis: from the bench to the clinic. *American Journal of Respiratory Cell and Molecular Biology* 42, 16–20.
- Rossi, G.P., Seccia, T.M., Barton, M., Danser, A.H.J., de Leeuw, P.W., Dhaun, N., *et al.* 2018. Endothelial factors in the pathogenesis and treatment of chronic kidney disease part i. *Journal of Hypertension* 36, 451–461.
- Rüster, C., Wolf, G. 2011. Angiotensin ii as a morphogenic cytokine stimulating renal fibrogenesis. *Journal of the American Society of Nephrology* 22, 1189–1199.
- Saladin, K.S., Gan, C.A., Cushman, H.N. 2018. *Anatomy & physiology: the unity of form and function, Eighth edition*. McGraw-Hill Education, New York, NY.
- Salim, H., Bintarti, T.W., Handayani, H. 2018. The effects of high-fat diet on histological changes of kidneys in rats. *Bimolecular and Health Science Journal* 1, 109–112.
- Sandoval, R., Lazcano, P., Ferrari, F., Pinto-Pardo, N., González-Billault, C., Utreras, E. 2018. Tnf- $\alpha$  increases production of reactive oxygen species through cdk5 activation in nociceptive neurons. *Frontiers in Physiology* 9.
- Sansbury, B.E., Hill, B.G. 2014. Anti-obesogenic role of endothelial nitric oxide synthase. *Vitamins and Hormones* 96, 323–346.
- Sansbury, B.E., Hill, B.G. 2014. Regulation of obesity and insulin resistance by nitric oxide. *Free Radical Biology and Medicine* 0, 383–399.
- Savard, S., Lavoie, P., Villeneuve, C., Agharazii, M., Lebel, M., Larivière, R. 2012. eNOS gene delivery prevents hypertension and reduces renal failure and injury in rats with reduced renal mass. *Nephrology Dialysis Transplantation* 27, 2182–2190.
- Sharma, SP. 2004. Nitric oxide and the kidney. *Indian Journal of Nephrology* 14, 77–84.
- Sherwood, L. 2016. *Human physiology: from cells to systems, 9th edition*. Cengage Learning, Boston, MA, USA.
- Stemmer, K., Perez-Tilve, D., Ananthakrishnan, G., Bort, A., Seeley, R.J., Tschöp, M.H., *et al.* 2012. High-fat-diet-induced obesity causes an inflammatory and tumor-promoting microenvironment in the rat kidney. *Disease Models and Mechanisms* 5, 627–635.
- Su, H., Lei, C.-T., Zhang, C. 2017. Interleukin-6 signaling pathway and its role in kidney disease: an update. *Frontiers in Immunology* 8.
- Sweiss, N., Sharma, K. 2014. Adiponectin effects on the kidney. *Best Practice and research: Clinical Endocrinology and Metabolism* 28, 71–79.
- Tan, R.J., Liu, Y. 2012. Matrix metalloproteinases in kidney homeostasis and diseases. *American Journal of Physiology Renal Physiology* 302, F1351–1361.
- Vaidya, S.R., Aeddula, N.R. 2019. *Chronic renal failure*. StatPearls Publishing, Treasure Island (FL).
- Vanhoutte, P.M. 2008. Arginine and arginase: Endothelial no synthase double crossed?. *Circulation Research* 102, 866–868.
- Wahba, I.M., Mak, R.H. 2007. Obesity and obesity-initiated metabolic syndrome: mechanistic links to chronic kidney disease. *Clinical Journal of the American Society of Nephrology* 2, 550–562.

- Wesson, D.E. 2006. Regulation of kidney acid excretion by endothelins. *Kidney International* 70, 2066–2073.
- Zhang, X., Lerman, L.O. 2015. Obesity and renovascular disease. *American Journal of Physiology-Renal Physiology* 309, F273–F279.
- Zoccali, C., Kramer, A., Jager, K.J. 2010. Chronic kidney disease and end-stage renal disease. *Nephrology Dialysis Transplantation Plus* 3, 213–224.