

DAFTAR PUSTAKA

- Al Hannan, F. dan Culligan, K.G., 2015. Human resistin and the RELM of inflammation in diabetes. *Diabetol. Metab. Syndr.* 7:54
- Arráiz, N., 2013. 3'UTR +62G A polymorphism of the resistin gene and its association with metabolic syndrome components. *Medicina Clinica*, 141(8), pp.325–331.
- Asano, H., Izawa, H., Nagata, K., Nakatochi, M., Kobayashi, M., Hirashiki, A., *et al.*, 2010. Plasma resistin concentration determined by common variants in the resistin gene and associated with metabolic traits in an aged Japanese population. *Diabetologia*. 53(2):234–246
- Azuma, K., Oguchi, S., Matsubara, Y., Mamizuka, T., Murata, M., Kikuchi, H., *et al.*, 2004. Novel resistin promoter polymorphisms: association with serum resistin level in Japanese obese individuals. *Horm. Metab. Res.* 36(8):564–70.
- Barnes, K.M. dan Miner, J.L., 2009. Role of resistin in insulin sensitivity in rodent and humans. *Curr. Protein Pept. Sci.* 10(1):96–107.
- Boumaiza, I., Omezzine, A., Rejeb, J., Rebhi, L., Rejeb, N. B., Nabli, N., *et al.*, 2012. Association between four resistin polymorphisms, obesity, and metabolic syndrome parameters in Tunisian volunteers. *Genet. Test. Mol. Biomark.* 16:12
- Boyras, M., Cekmez, F., Karaoglu, A., Cinaz, P., Durak, M., Bideci, A., 2013. Relationship of adipokines (adiponectin, resistin and RBP4) with metabolic syndrome components in pubertal obese children. *Biomark. Med.* 7, 423–8.
- Bray G.A., 2004. Medical consequences of obesity. *J. Clin. Endocrinol. Metab.* 89:2583–9.
- Chavarria-Ávila, E., Quezada, S.L.R., Guzmán-Ornelas, M.O., Castro-Albarrán, J., Aldrete, M. A. E., Mercado, M.V.D., *et al.*, 2013. Association of resistin gene 3'UTR +62G>A polymorphism with insulin resistance, adiposity and the adiponectin-resistin index in Mexican population. *Nutr. Hosp.* 28(6):1867–1876
- Cho, Y.M., Youn, B.S., Chung, S.S., Kim, K.W., Lee, H.K., Yu, K.Y., *et al.*, 2004. Common genetic polymorphisms in the promoter of resistin gene are major determinants of plasma resistin concentrations in humans. *Diabetologia* 47(3):559–565
- Dahlan, S.M., 2012. Besar Sampel dan Cara Pengambilan Sampel. Salemba Medika, Jakarta
- de Luis DA, Terroba MC, Cuellar L, Conde R, Primo D, Aller R, *et al.*, 2011. Resistin levels in morbid obese patients following the biliopancreatic diversion surgery. *Horm. Metab. Res.* 43:205–8.
- Degawa-Yamauchi, M., Bovenkerk, J. E., Juliar, B. E., Watson, W., Kerr, K., Jones, R. *et al.*, 2003. Serum resistin (FIZZ3) protein is increased in obese humans. *J. Clin. Endocrinol. Metab.* 88, 5452–5455

- Departemen Kesehatan RI., 2009. Laporan Hasil Riset Kesehatan Dasar (Riskesdas) Provinsi DI Yogyakarta Tahun 2007. Departemen Kesehatan RI, Jakarta
- El-Sayed Moustafa, J.S., Froguel, P., 2013. From obesity genetics to the future of personalized obesity therapy. *Nat. Rev. Endocrinol.* 9, 402–13.
- Falcao-Pires, I., Castro-Chaves. P., Miranda-Silva, D., P. Lourenco, A. Leite-Moreira. A.F., 2012. Physiological, pathological and potential therapeutic roles of adipokines. *Drug Discov. Today.* 17(15-16):880-9.
- Fasshauer, M. dan Bluher, M., 2015. Adipokine in health and disease. *Trends Pharmacol. Sci.* 36(7):461-70
- Filkova, M., Haluzik, M., Gay, S., Senolt, L., 2009. The role of resistin as a regulator of inflammation: Implications for various human pathologies. *Clin. Immunol.* 133(2):157-70
- Gao, C.L. , Zhao, D.Y. , Qiu, J., Zhang, C.M., Ji, C.B., Chen, X.H., *et al.*, 2009. Resistin induces rat insulinoma cell RINm5F apoptosis. *Mol. Biol. Rep.* 36:1703–1708.
- Gerber, M., Boettner, a, Seidel, B., Lammert, a, Bär, J., Schuster, E., *et al.*, 2005. Serum resistin levels of obese and lean children and adolescents: biochemical analysis and clinical relevance. *J. Clin. Endocrinol. Metab.* 90, 4503–4509.
- Gertler, A., 2014. Resistin activity in mice and humans affecting obesity, insulin resistance and T2DM: Blocking resistin action by resistin antagonis. *Adipobiology*, 6, 5–14.
- Ghosh S, Singh AK, Aruna B, Mukhopadhyay S, Ehtesham NZ. 2003. The genomic organization of mouse resistin reveals major differences from the human resistin: functional implications. *Gene.* 305(1):27–34.
- Gouni-Berthold, I., Giannakidou, E., Faust, M. , Ratzsch J .K, Berthold, H. K., Krone, W., 2005. Resistin gene 3'-Untranslated region +62G>A polymorphism is associated with hypertension but not diabetes mellitus type 2 in a German population. *J. Intern. Med.* 258: 518–526
- Gupta, V., Singh, A.K., Pant, A.B., 2010. Diabetes & Metabolic Syndrome : Clinical Research & Reviews Could resistin be a noble marker for metabolic syndrome ? 4, 239–244.
- Hartman, H.B., Hu, X., Tyler, K.X., Dalal, C.K., Lazar, M.A., 2002. Mechanisms regulating adipocyte expression of resistin. *J. Biol. Chem.* 277:10761–19754.
- Heilbronn, L. K., Rood, J., Janderoova, L., Albu J.B., Kelley. D.E, Ravussin, E., *et al.*, 2004. Relationship between serum resistin concentrations and insulin resistance in nonobese, obese, and obese diabetic subjects. *J. Clin. Endocrinol. Metab.* 89, 1844–1848
- Hivert, M.F., Manning, A.K., McAteer, J.B., Dupuis, J., Fox, C.S., Cupples, L.A., *et al.*, 2009. Association of variants in RETN with plasma resistin levels and diabetes-related traits in the Framingham offspring study. *Diabetes.* 58(3):750–756
- Huang, X. dan Yang, Z., 2015. Resistin's, obesity and insulin resistance: the continuing disconnect between rodents and humans. *J. Endocrinol. Invest.*

- Keane, K. N., Cruzat, V. F., Carlessi, R., de Bittencourt, P. I. H., dan Newsholme, P., 2015. Molecular event linking oxidative stress and inflammation to insulin resistance dan β -cell dysfunction. *Hindawi*. 2015:181643
- Kementrian Kesehatan RI., 2014. Riset Kesehatan Dasar (Riskesdas) Tahun 2013 Kementrian Kesehatan RI, Jakarta
- Koebnick, C., Wagner, K., Garcia, a L., Gruendel, S., Lahmann, P.H., Weickert, M.O., *et al.*, 2006. Increase in serum resistin during weight loss in overweight subjects is related to lipid metabolism. *Int. J. Obes.* 30, 1097–1103.
- Kusminski, C.M., McTernan, P. G., Kumar, S., 2005. Role of resistin in obesity, insulin resistance and type II diabetes. *Clin. Sci.* 109: 243–256
- Kwon, H. dan Pessin, J. E., 2013. Adipokine mediate inflammation and insulin resistance. *Front Endocrinol. (Lausanne)*. 4: 71.
- Lee, J.H., Chan, J.L., Yiannakouris, N., Kontogianni, M., Estrada, E., Seip, R., *et al.*, 2003. Circulating resistin levels are not associated with obesity or insulin resistance in humans and are not regulated by fasting or leptin administration: cross-sectional and interventional studies in normal, insulin-resistant, and diabetic subjects. *J. Clin. Endocrinol. Metab.* 88, 4848–4856.
- Lee, J.H., Bullen, J.W., Stoyneva, V.L., Mantzoros, C.S., 2005. Circulating resistin in lean, obese, and insulin-resistant mouse models: lack of association with insulinemia and glycemia. *Am. J. Physiol. Endocrinol. Metab.* 288(3):E625-32.
- Lumeng, C.N., Saltiel, A.R., 2011. Inflammatory links between obesity and metabolic disease. *J. Clin. Invest.* 121(6):2111–7
- Maebuchi, M., Machidori, M., Urade, R., Ogawa, T., Moriyama, T., 2003. Low resistin levels in adipose tissues and serum in high-fat fed mice and genetically obese mice: development of an ELISA system for quantification of resistin. *Arch. Biochem. Biophys.* 416, 164–170
- Makki, K., Froguel, P., Wolowczuk, I., 2013. Adipose tissue in obesity-related inflammation and insulin resistance: cells, cytokines, and chemokines. *ISRN Inflamm.* 2013:139239.
- Marti, A., Moreno-Aliaga, M.J., Hebebrand, J., dan Martinez J.A., 2004. Genes, lifestyles and obesity. *Int. J. Obes. Relat. Metab. Disord.* 3:S29-36.
- Martins, L. M., Oliviera, A. R. S., Cruz, K. J. C., Torres-Leal, F. L., Marrieiro, D. N., 2014. Obesity, inflammation, and insulin resistance. *Braz. J. Pharm. Sci.* 50:4.
- McAllister, E.J., Dhurandhar, N.V., Keith, S.W., Aronne, L.J., Barger, J., Baskin, M., *et al.* 2009. Ten putative contributors to the obesity epidemic. *Crit. Rev. Food. Sci. Nutr.* 49(10):868–913.
- McTernan, P. G., McTernan, C. L., Chetty, R., Jenner, K., Fisher, F.M., Lauer, M.N., *et al.*, 2002. Increased resistin gene and protein expression in human abdominal adipose tissue. *J. Clin. Endocrinol. Metab.* 87: 2407
- Menzaghi, C., Coco, A., Salvemini, L., Thompson, R., De Cosmo, S., Doria, A., *et al.*, 2006. Heritability of serum resistin and its genetic correlation with insulin resistance-related features in nondiabetic caucasians. *J. Clin. Endocrinol. Metab.* 91(7):2792-5.

- Menzaghi, C., Trischitta, V., 2010. Genetics of serum resistin: A paradigm of population-specific regulation? *Diabetologia*.
- Nagaev I, dan Smith U, 2001. Insulin resistance and type 2 diabetes are not related to resistin expression in human fat cells or skeletal muscle. *Biochem. Biophys. Res. Commun.* 285:561–564
- NCBI. dbSNP Reference SNP (refSNP) Cluster Report: rs3745368. Available from: URL: http://www.ncbi.nlm.nih.gov/SNP/snp_ref.cgi?rs=3745368
- Onuma, H., Osawa, H., Makino, H., 2008. Role of resistin in insulin resistance. *Rinsho Byori* 56(8):698-704
- Owecki, M., Miczke, A., Nikisch, E., Pupek-Musialik, D., Sowiski, J., 2011. Serum resistin concentrations are higher in human obesity but independent from insulin resistance. *Exp. Clin. Endocrinol. Diabetes* 119, 117–121.
- Park, H. K. dan Ahima, R. S., 2013. Resistin in rodent and humans. *Diabetes Metab. J.* 37:404-414
- Pravenec, M., Kazdová, L., Landa, V., Zidek, V., Mlejnek, P., Jansa, P., *et al.*, 2003. Transgenic and recombinant resistin impair skeletal muscle glucose metabolism in the spontaneously hypertensive rat, *J. Biol. Chem.* 278:45209–45215.
- Qatanani, M., Szwegold, N.R., Greaves, D.R., Ahima, R.S., Lazar, M.A., 2009. Macrophage-derived human resistin exacerbates adipose tissue inflammation and insulin resistance in mice. *J. Clin. Invest.* 119(3):531-9.
- Rajala, M. W., Qi, Y., Patel, H. R., Takahashi, N., Banerjee, R., Pajvani, U.B., *et al.*, 2004. Regulation of resistin expression and circulating levels in obesity, diabetes, and fasting. *Diabetes* 53, 1671–1679
- Savage, D.B., Sewter, C.P., Klenk, E.S., Segal, D.G., Vidal-puig, A., Considine, R. *et al.*, 2001. Resistin/Fizz3 Expression in Relation to Obesity dan Peroxisome Proliferator-Activates Receptor Gamma Action in Humans. 50: 2–5.
- Schwartz, D.R., dan Lazar, M.A., 2011. Human resistin : found in translation from mouse to man. *Trends Endocrinol. Metab.* 22, 259–265.
- Shawky, R.M., Sadik, D.I., 2012. Genetics of obesity. *Egypt. J. Med. Hum. Genet.* 13: 11–17.
- Shuldiner AR, Yang R, Gong DW. 2001. Resistin, obesity and insulin resistance: the emerging role of the adipocyte as an endocrine organ. *N. Engl. J. Med.* 345:1345–1346.
- Silswal, N., Singh, A.K., Aruna, B., Mukhopadhyay, S., Ghosh, S., Ehtesham, N.Z., 2005. Human resistin stimulates the pro-inflammatory cytokines TNF-alpha and IL-12 in macrophages by NF-KappaB-Dependent pathway. *Biochem. Biophys. Res. Commun.* 334(4):1092-101.
- Singh, A. K., Tiwari, S., Gupta, A., Shukla, K. K., Chhabra, K. G., Pandey, A., *et al.*, 2014. Association of resistin with insulin resistance and factors of metabolic syndrome in north india. *Indian J. Clin. Biochem.* 30 (3): 255-262
- Stejskal, D., Prosková, J., Adamovská, S., Juráková, R., Bartek, J., 2002. Preliminary experience with resistin assessment in common population. *Biomed. Pap. Med. Fac. Univ. Palacky Olomouc Czech. Repub.* 146(2):47-9.

- Steppan, C.M., Bailey, S.T., Bhat, S., Brown, E.J., Banerjee, R.R., Wright, C.M., *et al.*, 2001. The hormone resistin links obesity to diabetes. *Nature*. 409:307–12.
- Steppan, C.M., Wang, J., Whiteman, E.L., Birnbaum, M.J., Lazar, M.A., 2005. Activation of SOCS-3 by resistin. *Mol. Cell. Biol.* 25: 1569–1575.
- Tan, M.S., Chang, S.Y., Chang, D.M., Tsai, J.C., Lee, Y.J., 2003. Association of resistin gene 3'-untranslated region +62G→A polymorphism with type 2 diabetes and hypertension in a chinese population. *J. Clin. Endocrinol. Metab.* 88:1258–1263
- Tilg, H. dan Moschen, A.R., 2006. Inflammatory mechanisms in the regulation of insulin resistance. *Mol. Med.* 14(3–4):222–31.
- Waki, H., dan Tontonoz, P., 2007. Endocrine functions of adipose tissue. *Annu. Rev. Pathol.* 2:31–56.
- Way, J.M., Gorgun, C.Z., Tong, Q., Uysal, K.T., Brown, K.K., Harrington, W.W., *et al.*, 2001. Adipose Tissue Resistin Expression is Severely Suppressed in Obesity and Stimulated by Peroxisome Proliferator-activated Receptor γ Agonists. *J. Biol. Chem.* 276, 25651–25653.
- Weisberg, S.P., McCann, D., Desai, M., Rosenbaum, M., Leibel, R.L., Ferrante, A.W., 2003. Obesity is associated with macrophage accumulation in adipose tissue. *J. Clin. Invest.* 112(12):1796–808.
- World Health Organization, 2000. Obesity: Preventing and Managing the Global Epidemic. WHO Obesity Technical Report Series 894. Geneva, Switzerland
- World Health Organization, 2000. The Asia-Pacific Perspective: Redefining Obesity and Its Treatment. WHO.
- World Health Organization, 2015. Obesity and Overweight,; Fact sheet: 311, <http://www.who.int/mediacentre/factsheets/fs311/en/>
- Wright, S.M., dan Aronne, L.J., 2012. Causes of obesity. *Abdom. Imaging.* 37(5):730–2.
- Valsamakis, G., McTernan, P. G., Chetty, R., Al Daghri, N., Field, A., Hanif, W. *et al.*, 2004. Modest weight loss and reduction in waist circumference after medical treatment are associated with favourable changes in serum adipocytokines. *Metab. Clin. Exp.* 53: 430–434
- Xu, J. Y., Sham, P.C., Xu, A., Tso, A. W. K., Wat, N. M. S., Cheng, K.Y., *et al.*, 2007. Resistin gene polymorphisms and progression of glycaemia in southern chinese: a 5-year prospective study. *Clin. Endocrinol.* 66: 211–217
- Yamada, C., Moriyama, K., Takahashi, E., 2012. Optimal cut-off point for homeostasis model assessment of insulin resistance to discriminate metabolic syndrome in non-diabetic Japanese subjects. *J. Diabetes Investig.* 3, 384–387.
- Yang, Y., Xiao, M., Mao, Y., Li, H., Zhao, S., Gu, Y., *et al.*, 2009. Resistin and insulin resistance in hepatocytes: resistin disturbs glycogen metabolism at the protein level. *Biomed. Pharmacother.* 63: 366–374.