

## DAFTAR PUSTAKA

- Abdul-Ghani M, DeFronzo RA, Eldor R. 2015. Combination therapy in type 2 diabetes mellitus. In : DeFronzo RA, Ferrannini E, Zimmet P, Alberti KGMM (eds). *International Textbook of Diabetes Mellitus* 4th ed Wiley Blackwell : 686-708.
- Adeyemo A, Rotimi C. 2010. Genetic variants associated with complex human diseases show wide variation across multiple populations. *Public Health Genomics*.13 :72-79.
- Ahmad T, Lee IM, Paré G, Chasman DI, Rose L, Ridker PM, et al.2011 Lifestyle Interaction With Fat Mass and Obesity-Associated (FTO) Genotype and Risk of Obesity in Apparently Healthy U.S. Women. *Diabetes Care*. 34(3):675-80.
- Alsmadi O, Al-Rubeaan K, Mohamed G, Alkayal F, Al-Saud H, Al-Saud NA, et al. 2008. Weak or no association of TCF7L2 variants with type 2 diabetes risk in an Arab population. *BMC Med Genet*. 9: 72.
- American Diabetes Association. 2006. Diagnosis and Classification of Diabetes Mellitus, *Diabetes Care*, 29 (Suppl 1): S43 – S48.
- Andreasen CH, Stender-Petersen KL, Mogensen MS, Torekov SS, Wegner L, Andersen G, et al.2008. Low physical activity accentuates the effect of the FTO rs9939609 polymorphism on body fat accumulation. *Diabetes*.57:95–101.
- Balasubramanyam M. TCF7L2 and diabetes a transcription gene with prescription hope ? *Curr Sci*. 93 (5): 613-615.
- Balitbangkes.2008. *Laporan Hasil Riset Kesehatan Dasar Nasional 2007*. Badan Penelitian dan Pengembangan Kesehatan Depkes RI.
- Balitbangkes.2013. *Laporan Hasil Riset Kesehatan Dasar Nasional 2012*. Badan Penelitian dan Pengembangan Kesehatan Depkes RI.
- Binh TQ, Phuong PT, Nhung BT, Thoang DD, Lien HT, Thanh DV. 2012. Association of the common FTO-rs9939609 polymorphism with type 2 diabetes, independent of obesity-related traits in a Vietnamese population. *Gene* 513 : 31-35.
- Boissel S, Reish O, Proulx K, Kawagoe-Takaki H, Sedgwick B, Yeo GS, et al.2009 Loss-of-function mutation in the dioxygenase-encoding FTO gene causes severe growth retardation and multiple malformations. *Am J Hum Genet*. 85(1):106-11.
- Cauchi S, Meyre D, Choquet H, Dina C, Born C, Marre M, Balkau B, Froguel P. 2006a. TCF7L2 Variation predicts hyperglycemia incidence in a French general population : the data from an Epidemiological Study on the insulin Resistance Syndrome (DESIR) study. *Diabetes*. 55.: 3189-92.
- Cauchi S, Meyre D, Dina C, Choquet H, Samson C, Gallina S, et al.2006b. Transcription factor TCF7L2 genetic study in the French population:

- expression in human  $\beta$ -cells and adipose tissue and strong association with type 2 diabetes. *Diabetes* 55 :2903 –2908.
- Chandak GR, Janipalli CS, Bhaskar S, Kulkarni SR, Mohankrishna P, Hattersley AT, *et al.*2006. Common variants in the TCF7L2 gene are strongly associated with type 2 diabetes mellitus in the Indian population. *Diabetologia* 50 :63 –67.
- Chang YC, Chang TJ, Jiang YD, Kuo SS, Lee KC, Chiu KC, Chuang LM.2007. Association study of the genetic polymorphisms of the transcription factor 7-like 2 (TCF7L2) gene and type 2 diabetes in the Chinese population. *Diabetes* 56 :2631 –2637.
- Courtney CH, Kruszynska YT, and Olefsky JM. 2003 Insulin resistance. In : Porte D, Sherwin RS, Baron A (eds). *Ellenberg and Rifkin's Diabetes Mellitus*. Sixth ed. Mc Graw-Hill. New York : 367-400.
- Damcott CM, Pollin TI, Reinhart LJ, Ott SH, Shen H, Silver KD, *et al.*2006. Polymorphisms in the transcription factor 7-like 2 (TCF7L2) gene are associated with type 2 diabetes in the Amish: replication and evidence for a role in both insulin secretion and insulin resistance. *Diabetes* 55 :2654 –2659.
- Deacon CF, Carr RD, Holst JJ. 2008.DPP-4 inhibitor therapy: new directions in the treatment of type 2 diabetes. *Front Biosci.* 13:1780-94.
- Dina C, Meyre D, Gallina S, Durand E, Korner A, Jacobson P,*et al.* 2007.Variation in FTO contributes to childhood obesity and severe adult obesity.*Nat Genet.*;39:724–726.
- Dupuis J, Langenberg C, Prokopenko I, Saxena R, Soranzo N, Jackson AU,*et al.*2010. New genetic loci implicated in fasting glucose homeostasis and their impact on type 2 diabetes in east Asians. *Nat Genet.*;42(5):464.
- Florez JC, Jablonsky KA, Bayley N, Pollin TI, de Bakker PI, Shuldiner AR, *et al.* 2006. TCF7L2 polymorphisms and progression to diabetes in the Diabetes Prevention Program. *N Engl J Med.* 355: 241- 50.
- Florez JC. 2008. The genetic of type 2 diabetes : A realistic appraisal in 2008. *J Clin endocrinol Metab* 93 : 4633-4642.
- Frayling TM, Timpson NJ, Weedon MN, Zeggini E, Freathy RM, Lindgren CM, *et al.*2007. A common variant in the FTO gene is associated with body mass index and predisposes to childhood and adult obesity. *Science* . 316(5826):889-894.
- Genetic Home Reference. 2011. <http://ghr.nlm.nih.gov/gene/TCF7L2>. Diakses 14 April 2011.
- Genetic Home Reference. 2011. <http://ghr.nlm.nih.gov/gene/FTO>. Diakses 14 April 2011.
- Gerken T, Girard CA, Tung YC, Webby CJ, Saudek V, Hewitson KS, *et al.* 2007.The obesity-associated FTO gene encodes a 2-oxoglutarate-dependent nucleic acid demethylase. *Science* (New York, NY).318:1469–1472.
- Grant SF, Thorleifsson G, Reynisdottir I, Benediktsson R, Manolescu A, Sainz J, *et al.*2006. Variant of transcription factor 7-like 2 (TCF7L2) gene confers risk of type 2 diabetes. *Nat Genet* 38:320-23.

- Grant RW, Moore AF, Florez JC. 2009. Genetic architecture of type 2 diabetes : recent progress and clinical implications. *Diabetes Care*. 32 (6). 1107-14.
- Groves CJ, Zeggini E, Minton J, Frayling TM, Weedon MN, Rayner NW, *et al.* 2006. Association analysis of 6,736 U.K. subjects provides replication and confirms TCF7L2 as a type 2 diabetes susceptibility gene with a substantial effect on individual risk. *Diabetes* 55 :2640 –2644.
- Hayashi T, Iwamoto Y, Kaku K, Hirose H, Maeda S.2007. Replication study for the association of TCF7L2 with susceptibility to type 2 diabetes in a Japanese population. *Diabetologia* 50 :980 –984.
- Hermans MP, Levy JC, Morris RJ, Turner RC. 1999a. Comparison of tests of beta-cell function across a range of glucose tolerance from normal to diabetes. *Diabetes* 48 (9): 1779-86.
- Hermans MP, Levy JC, Morris RJ, Turner RC. 1999b. Comparison of insulin sensitivity tests across a range of glucose tolerance from normal to diabetes. *Diabetologia* 42 (6): 678-87.
- Hertel JK, Johansson S, Sonetsted E, Jonsson A, Lie RT, *et al.* 2011. FTO, type 2 diabetes and weight gain throughout adult life : a meta-analysis of 41,504 subjects from the Scandinavian HUNT, MDC, and MPP studies. *Diabetes* 60 : 1637-1644.
- Holst J, Gromada J.2010. Role os incretins hormones in the regulation of insulin secretion in diabetic and non diabetic humans. *Am J Physiol Endocrinol Metab.*299 :E10-E13.
- Horikoshi M, Hara K, Ito C, Nagai R, Froguel P, Kadowaki T. 2007. A genetic variation of the transcription factor 7-like 2 gene is associated with risk of type 2 diabetes in the Japanese population. *Diabetologia* 50 :747 – 751.
- Kadowaki T, Hara K, Yamauchi T, Terauchi Y, Tobe K, Nagai R. 2003. Molecular mechanism of insulin resistance and obesity. *Exp Biol Med.*228:111-117.
- Kahn SE, Hull RL, Utzschneider KM. 2006. Review Article mechanisms linking obesity to insulin resistance and type 2 diabetes. *Nature* 444 : 840-846.
- Kitabchi AE, Tempresa M, Knowler WC, *et al.*2005. Role of insulin secretion and sensitivity in the evolution of type 2 diabetes in the diabetes prevention program: effects of lifestyle intervention and metformin. *Diabetes*. 54(8):2404-14.
- Knowler WC, Barret-Connor E, Fowler SE, *et al.*2002. The Diabetes Prevention Program Research Group : Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. *N Engl J Med.*346 : 393-403.
- Legry V, Cotel D, Ferrieres J, Arveiler D, Andrieux N, Bingham A *et al.*, 2009. Effect of an FTO polymorphism on fat mass, obesity and type 2 diabetes mellitus in the French MONICA study. *Metabolism*, 58: 971-975.
- Lehman DM, Hunt KJ, Leach RJ, Hamlington J, Arya R, Abboud HE, *et al.* 2007. Haplotypes of transcription factor 7-like 2 (TCF7L2) gene and

- its upstream region are associated with type 2 diabetes and age of onset in Mexican Americans. *Diabetes* 56 :389 –393.
- Lemeshow, S., Hosmer, D.W., dan Klar, J., 1997, *Besar Sampel dalam Penelitian Kesehatan*, Edisi Bahasa Indonesia, Gadjah Mada University Press, Yogyakarta.
- Li H, Kilpelainen TO, Liu C, Zhu J, Liu Y, Hu C, *et al.* 2012. Association of genetic variation in FTO with risk of obesity and type 2 diabetes with data from 96,551 East and South Asians. *Diabetologia* 55: 981-995.
- Loos RJJ and Bouchard C. FTO : the first gene contributing to common forms of human obesity. *Obesity* 9 : 246-250.
- Lyssenko V, Lupi R, Marchetti P, Del GS, Orho-Melander M, Almgren P, *et al.* 2007. Mechanisms by which common variants in the TCF7L2 gene increase risk of type 2 diabetes. *J Clin Invest* 117: 2155– 2163.
- Lyssenko V, Jonsson A, Almgren P, *et al.* 2008. Clinical risk factors, DNA variants, and the development of type 2 diabetes. *N Engl J Med.* 359(21):2220-32.
- Madiyono B, Moeslihan S, Sastroasmoro, Budiman I, Purwanto SH. 2008. Dalam : Sastroasmoro, S, Ismael, S. (ed). *Dasar-dasar Metodologi Penelitian Klinis*, 3<sup>rd</sup> Ed. CV Sagung Seto, Jakarta : 302-331.
- Marquezine GF, Pereira AC, Sousa AGP , Mill JG, Hueb WA, Krieger JE.. 2008. TCF7L2 variant genotypes and type 2 diabetes risk in Brazil : significant association, but not a significant tool for risk stratification in the general population. *BMC Med Genet.* 9: 106.
- Matthews DR, Hosker JP, Rudenski AS, Naylor BA, Treacher DF, Turner RC.1985. Homeostatis model assesment : insulin resistance and beta-cell function from fasting plasma glucose and insulin concentration in man. *Diabetologia* 28 : 412-419.
- McCarthy M. 2010. Genomics, type 2 diabetes and obesity. *N Eng J Med.*363 : 2339-2350.
- McGarry JD.2002. Dysregulation of fatty acid metabolism in the etiology of type 2 diabetes.*Diabetes.*51:7-15.
- Munoz J, Lok KH, Gower BA, Fernandez JR, Hunter GR, Lara-Castro C, *et al.*2006. Polymorphism in the transcription factor 7-like 2 (TCF7L2) gene is associated with reduced insulin secretion in nondiabetic women. *Diabetes* 55 :3630 –3634.
- Nauck MA, Vardarli I, Deacon CF, Holst JJ, Meier JJ.2011. Secretion of glucagon-like peptide-1 (GLP-1) in type 2 diabetes: what is up, what is down? *Diabetologia* 54(1) : 10-18
- Ng MC, Park KS, Oh B,Tam CH,Cho YM,Shin HD, *et al.*2008. Implication of genetic variants near TCF7L2, SLC30A8, HHEX, CDKAL1, CDKN2A/B, IGF2BP2, and FTO in type 2 diabetes and obesity in 6,719 Asians. *Diabetes* 57 :2226 –2233.
- Pearson ER, Donnelly LA, Kimber C, Whitley A, Doney AS, McCarthy MI.2007. Variation in TCF7L2 influences therapeutic response to sulfonylureas: a GoDARTs study. *Diabetes* 56(8):2178-82.

- PERKENI (Perkumpulan Endokrinologi Indonesia). 2006. Konsensus Pengelolaan Diabetes Melitus di Indonesia. Perkumpulan Endokrinologi Indonesia. Jakarta : 1.
- PERKENI (Perkumpulan Endokrinologi Indonesia). 2011. Konsensus Pengelolaan Diabetes Melitus di Indonesia. Perkumpulan Endokrinologi Indonesia. Jakarta : 7.
- PERKENI (Perkumpulan Endokrinologi Indonesia). 2015. Konsensus Pengelolaan Diabetes Melitus di Indonesia. Perkumpulan Endokrinologi Indonesia. Jakarta : 12.
- Qiao Q, Williams DE, Imperatore G, Narayan KMV, Tuomilehto J. 2015. Epidemiology and geography of type 2 diabetes mellitus. In : DeFronzo RA, Ferrannini E, Zimmet P, Alberti KGMM (eds). *International Textbook of Diabetes Mellitus* 4th ed Wiley Blackwell : 29-51.
- Radha V and Mohan V. 2007. Genetic predisposition to type 2 diabetes among Asian Indians. *Indian J Med Res.* 125:259-60.
- Raitakari OT, Ronnema T, Huupponen R, Viikari L, Fan M, Marniemi J, *et al.* 2007. Variation of the transcription factor 7-like 2 (TCF7L2) gene predicts impaired fasting glucose in healthy young adults: the Cardiovascular Risk in Young Finns Study. *Diabetes Care* 30:2299–2301.
- Reaven GM, Abbasi F, McLaughlin T. 2004. Obesity, insulin resistance and cardiovascular disease. *Recent Prog Horm Res*, 59:207-223.
- Saxena R, Gianniny L, Burt NP, Lyssenko V, Giuducci C, Sjogren M, *et al.* 2006. Common single nucleotide polymorphisms in TCF7L2 are reproducibly associated with type 2 diabetes and reduce the insulin response to glucose in nondiabetic individuals. *Diabetes* 55 :2890 – 2895.
- Schroner Z, Javorsky M, Tkacova R, *et al.* 2011. Effect of sulphonylurea treatment on glycaemic control is related to TCF7L2 genotype in patients with type 2 diabetes. *Diabetes Obes Metab.* 13(1):89-91.
- Scott LJ, Bonnycastle LL, Willer CJ, Sprau AG, Jackson AU, Narisu N, *et al.* 2006. Association of transcription factor 7-like 2 (TCF7L2) variants with type 2 diabetes in a Finnish sample. *Diabetes* 55 :2649 –2653.
- Scuteri A, Sanna S, Chen WM, Uda M, Albai G, Strait J, *et al.* 2007. Genome-wide association scan shows genetic variants in the FTO gene are associated with obesity-related traits. *PLoS Genet* 3: e115.
- Silbernagel G, Renner W, Grammer TB, *et al.* 2011. Association of TCF7L2 SNPs with age at onset of type 2 diabetes and proinsulin/insulin ratio but not with glucagon-like peptide 1. *Diabetes Metab Res Rev.* 27(5):499-505.
- Speakman JR, Rance KA and Johnstone AM. 2008. Polymorphisms of FTO gene are associated with variation in energy intake, but not energy expenditure. *Obesity* 16 : 1961-1965.
- Stratigopoulos G, Padilla SL, LeDuc CA, Watson E, Hattersley AT, McCarthy MI, *et al.* 2008. Regulation of Fto/Ftm gene expression in mice and humans. *Am J Physiol Regul Integr Comp Physiol.* 294:R1185–1196.

- Ta MT, Nguyen KT, Nguyen ND, Campbell LV, Nguyen TV. 2010. Identification of undiagnosed type 2 diabetes by systolic blood pressure and waist-to-hip ratio. *Diabetologia* 53 : 2139-2146.
- Tataranni PA and Bogardus C. 2003. Obesity and diabetes mellitus. In : Porte D, Sherwin RS, Baron A (eds). *Ellenberg and Rifkin's Diabetes Mellitus*. Sixth ed. Mc Graw-Hill. New York : 401-414.
- Toumlehto J, Lindstrom J, Eriksson JG, *et al.* 2001. Prevention of type 2 diabetes mellitus by changes in lifestyle among subjects with impaired glucose tolerance. *N Engl J Med*.344 : 1343-1350.
- Villareal DT, Robertson H, Bell GI, Patterson BW, Tran H, Wise B,*et al.*,TCF7L2 variant rs7903146 affects the risk of type 2 diabetes by modulating incretin action.2010. *Diabetes* 59(2):479-85.
- Wallace TM, Levy JC, Matthews DR. 2004. Use and abuse of HOMA modeling. *Diabetes Care* 27 (6): 1487-95.
- WHO.1999. *Obesity:Preventing and Managing the Global Epidemic.Report of a WHO Consultation*. Technical report series 894. Geneva.
- WHO. 2000. *The Asia Pasific perspective:Redefining obesity and its treatment*. World Health Organization Collaborating Centre for the Epidemiology of Diabetes Mellitus and Health Promotion for Noncommunicable Disease. Melbourne.
- Wilfred LP, Chiang YA, Jin T. 2012. The involvement of the wnt signaling pathway and TCF7L2 in diabetes melitus : The current understanding, dispute and perspective. *Cell & Bioscience* 2(28):1-12.
- Zeggini E.2007.: A new era for Type 2 diabetes genetics. *Diabet Med*, 24(11):1181-1186.
- Zimmet P, Alberti KG, Shaw J.2001. Global and societal implications of the diabetes epidemic.*Nature*. ;414:782–787.