

Daftar Pustaka

- Abbasi, F., Chu, J. W., Lamendola, C., McLaughlin, T., Hayden, J., Reaven, G. M., et al. (2004). Discrimination between obesity and insulin resistance in the relationship with adiponectin. *Diabetes*, 53(3), 585–590.
- American Diabetes Association. (2010). Diagnosis and classification of diabetes melitus. *Diabetes care*, 33 Suppl 1(Suppl 1), S62–S69.
- American Diabetes Association. (2015). Standards of medical care in diabetes-2015 abridged for primary care providers. *Clin diabetes : a publication of the American Diabetes Association*, 33(2), 97–111.
- American Diabetes Association. (2020). Classification and diagnosis of diabetes: Standards of medical care in diabetes—2021. *Diabetes Care*, 44(Supplement 1), S15–S33.
- Amemiya-Kudo, M., Shimano, H., Hasty, A. H., Yahagi, N., Yoshikawa, T., Matsuzaka, T., et al. (2002). Transcriptional activities of nuclear SREBP-1a, -1c, and -2 to different target promoters of lipogenic and cholesterologenic genes. *J Lipid Res*, 43(8), 1220–1235.
- Arafat, A. M., Weickert, M. O., Adamidou, A., Otto, B., Perschel, F. H., Spranger, J., et al. (2013). The impact of insulin-independent, glucagon-induced suppression of total ghrelin on satiety in obesity and type 1 diabetes mellitus. *J. Clin. Endocr.*, 98(10), 4133–4142.
- Arkan, M. C., Hevener, A. L., Greten, F. R., Maeda, S., Li, Z. W., Long, J. M., et al. (2005). IKK- β links inflammation to obesity-induced insulin resistance. *Nat Med*, 11(2), 191–198.
- Azevedo, M., & Alla, S. (2008). Diabetes in sub-saharan Africa: kenya, mali, mozambique, Nigeria, South Africa and zambia. *Int J Diabetes Dev Ctries*, 28(4), 101–108.
- Baker, R. G., Hayden, M. S., & Ghosh, S. (2011). NF- κ B, inflammation, and metabolic disease. *Cell Metab*, 13(1), 11–22.
- Bakris, G. L., Fonseca, V. A., Sharma, K., & Wright, E. M. (2009). Renal sodium-glucose transport: role in diabetes mellitus and potential clinical implications. *KI*, 75(12), 1272–1277.
- Bashir, M., Naem, E., Taha, F., Konje, J. C., & Abou-Samra, A. B. (2019). Outcomes of type 1 diabetes melitus in pregnancy; effect of excessive gestational weight gain and hyperglycaemia on fetal growth. *Diabetes Metab Syndr*, 13(1), 84–88.
- Bays, H., Mandarino, L., & DeFronzo, R. A. (2004). Role of the adipocyte, free fatty acids, and ectopic fat in pathogenesis of type 2 diabetes mellitus: peroxisomal proliferator-activated receptor agonists provide a rational therapeutic approach. *J Clin Endocr*, 89(2), 463–478.
- Bevilacqua, S., Bonadonna, R., Buzzigoli, G., Boni, C., Ciociaro, D., Maccari, F., Giorico, M. A., & Ferrannini, E. (1987). Acute elevation of free fatty acid levels leads to hepatic insulin resistance in obese subjects. *Metab. Clin. Expl*, 36(5), 502–506.

- Bintang, M. (2018). *Biokimia Teknik Penelitian Edisi 2*. Erlangga, Jakarta
- Biorad. (2008). D-10, Hemoglobin A1c Program Instruction Manual. Biorad Laboratories, Inc., US
- Boersma, G. J., Johansson, E., Pereira, M. J., Heurling, K., Skrtic, S., Lau, J., et al. (2018). Altered Glucose Uptake in Muscle, Visceral Adipose Tissue, and Brain Predict Whole-Body Insulin Resistance and may Contribute to the Development of Type 2 Diabetes: A Combined PET/MR Study. *Horm Metab Res*, 50(8), 627–639.
- Bratanova-Tochkova, T. K., Cheng, H., Daniel, S., Gunawardana, S., Liu, Y. J., Mulvaney-Musa, J., et al. (2002). Triggering and augmentation mechanisms, granule pools, and biphasic insulin secretion. *Diabetes*, 51 Suppl 1, S83–S90.
- Brown, M. S., & Goldstein, J. L. (1997). The SREBP pathway: regulation of cholesterol metabolism by proteolysis of a membrane-bound transcription factor. *Cell*, 89(3), 331–340.
- Brownlee, M., & Hirsch, I. B. (2006). Glycemic variability: a hemoglobin A1c-independent risk factor for diabetic complications. *JAMA*, 295(14), 1707–1708.
- Buettner G. R. (1993). The pecking order of free radicals and antioxidants: lipid peroxidation, alpha-tocopherol, and ascorbate. *Arch. Biochem. Biophys.*, 300(2), 535–543.
- Cai, D., Yuan, M., Frantz, D. F., Melendez, P. A., Hansen, L., Lee, J., et al. (2005). Local and systemic insulin resistance resulting from hepatic activation of IKK- β and NF-kappaB. *Nat Med*, 11(2), 183–190.
- Catalá A. (2006). An overview of lipid peroxidation with emphasis in outer segments of photoreceptors and the chemiluminescence assay. *Int J Cell Biol*, 38(9), 1482–1495.
- Centers for Disease Control and Prevention. (2021). Diabetes Tests. Available at: <https://www.cdc.gov/diabetes/basics/getting-tested.html>. Diakses pada September 2022
- Cersosimo, E., & DeFronzo, R. A. (2006). Insulin resistance and endothelial dysfunction: the road map to cardiovascular diseases. *Diabetes/Metab Res Rev*, 22(6), 423–436.
- Cersosimo, E., Triplitt, C., Solis-Herrera, C., Mandarino, L.J. and DeFronzo, R.A. (2018). Pathogenesis of Type 2 Diabetes Mellitus. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK279115/>.
- Chatterjee, S., Khunti, K., & Davies, M. J. (2017). Type 2 diabetes. *Lancet (London, England)*, 389(10085), 2239–2251.
- Chiarpotto, E., Domenicotti, C., Paola, D., Vitali, A., Nitti, M., Pronzato, M. A., et al. (1999). Regulation of rat hepatocyte protein kinase C β isoenzymes by the lipid peroxidation product 4-hydroxy-2,3-nonenal: A signaling pathway to modulate vesicular transport of glycoproteins. *Hepatology (Baltimore, Md.)*, 29(5), 1565–1572.

- Chia, C. W., Egan, J. M., & Ferrucci, L. (2018). Age-Related Changes in Glucose Metabolism, Hyperglycemia, and Cardiovascular Risk. *Circ. Res.*, 123(7), 886–904.
- Cusi, K., Maezono, K., Osman, A., Pendergrass, M., Patti, M. E., Pratipanawatr, T., et al. (2000). Insulin resistance differentially affects the PI 3-kinase- and MAP kinase-mediated signaling in human muscle. *J Clin Investig*, 105(3), 311–320.
- Czech M. P. (2017). Insulin action and resistance in obesity and type 2 diabetes. *Nat Med*, 23(7), 804–814.
- Dalgaard, L.T. and Pedersen, O., 2001. Uncoupling proteins: functional characteristics and role in the pathogenesis of obesity and Type II diabetes. *Diabetologia*, 44(8), pp.946–965.
- DeFronzo, R. A., & Ferrannini, E. (1991). Insulin resistance. A multifaceted syndrome responsible for NIDDM, obesity, hypertension, dyslipidemia, and atherosclerotic cardiovascular disease. *Diabetes care*, 14(3), 173–194.
- DeFronzo, R. A. (2009). From the Triumvirate to the Ominous Octet: A New Paradigm for the Treatment of Type 2 Diabetes Mellitus. *Diabetes*, 58(4), 773–795.
- DeFronzo, R. A., Hompesch, M., Kasichayanula, S., Liu, X., Hong, Y., Pfister, M., et al. (2013). Characterization of renal glucose reabsorption in response to dapagliflozin in healthy subjects and subjects with type 2 diabetes. *Diabetes care*, 36(10), 3169–3176.
- DeFronzo, R.A., Ferrannini, E., Groop, L., Henry, R.R., Herman, W.H., Hols. (2015). Type 2 diabetes mellitus. *Nat Rev Dis Primers*, 1:1-23.
- Departemen Kesehatan RI. (2005). *Pedoman Pemeriksaan Labortorium untuk Pemeriksaan Penyakit Diabetes Melitus*. Jakarta
- Després J. P. (2012). Body fat distribution and risk of cardiovascular disease: an update. *Circulation*, 126(10), 1301–1313.
- Ding, E. L., Song, Y., Malik, V. S., & Liu, S. (2006). Sex differences of endogenous sex hormones and risk of type 2 diabetes: a systematic review and meta-analysis. *JAMA*, 295(11), 1288–1299.
- Di Paola, R., Frittitta, L., Miscio, G., Bozzali, M., Baratta, R., Centra, M., et al. (2002). A variation in 3' UTR of hPTP1B increases specific gene expression and associates with insulin resistance. *Am J Hum Genet*, 70(3), 806–812.
- Dodson, G., & Steiner, D. (1998). The role of assembly in insulin's biosynthesis. *Curr Opin Struct Biol*, 8(2), 189–194.
- du Toit, E. F., & Donner, D.G. (2012). Myocardial Insulin Resistance: An Overview of Its Causes, Effects, and Potential Therapy. *DOAJ*.
- Ensembl Asia. (2019). The International Genome Sample Resource. Available at: https://asia.ensembl.org/Homo_sapiens/Variation/Population?db=core;r=17:17811503-17812503;v=rs2297508;vdb=variation;vf=104619247#population_freq_AFR.

Diakses pada April 2023

- Esterbauer, H., Schaur, R. J., & Zollner, H. (1991). Chemistry and biochemistry of 4-hydroxynonenal, malonaldehyde and related aldehydes. *Free Radic Biol Med*, 11(1), 81–128.
- Evans, J. L., Goldfine, I. D., Maddux, B. A., & Grodsky, G. M. (2002). Oxidative stress and stress-activated signaling pathways: a unifying hypothesis of type 2 diabetes. *Endocr Rev*, 23(5), 599–622.
- Fan, X. X., Leung, E. L., Xie, Y., Liu, Z. Q., Zheng, Y. F., Yao, X. J., et al. (2018). Suppression of Lipogenesis via Reactive Oxygen Species-AMPK Signaling for Treating Malignant and Proliferative Diseases. *Antioxid Redox Sign*, 28(5), 339–357.
- Felder, T. K., Oberkofler, H., Weitgasser, R., Mackevics, V., Krempler, F., Paulweber, B., et al. (2007). The SREBF-1 locus is associated with type 2 diabetes and plasma adiponectin levels in a middle-aged Austrian population. *Int J Obes* (2005), 31(7), 1099–1103.
- Ferrannini, E. (2010). Sodium-glucose transporter-2 inhibition as an antidiabetic therapy. *Nephrol Dial Transplant*, 25(7), 2041–2043.
- Freeman J. S. (2009). Role of the incretin pathway in the pathogenesis of type 2 diabetes mellitus. *Cleve Clin J Med*, 76 Suppl 5, S12–S19.
- Friedman J. M. (2009). Leptin at 14 y of age: an ongoing story. *Am J Clin Nutr*, 89(3), 973S–979S.
- Fuchsberger, C., Flannick, J., Teslovich, T. M., Mahajan, A., Agarwala, V., Gaulton, K. J., et al. (2016). The genetic architecture of type 2 diabetes. *Nature*, 536(7614), 41–47.
- Galicia-Garcia, U., Benito-Vicente, A., Jebari, S., Larrea-Sebal, A., Siddiqi, H., Uribe, K. B., et al. (2020). Pathophysiology of Type 2 Diabetes Mellitus. *Int J Mol Sci*, 21(17), 6275.
- Gerich, J. E., Meyer, C., Woerle, H. J., & Stumvoll, M. (2001). Renal gluconeogenesis: its importance in human glucose homeostasis. *Diabetes care*, 24(2), 382–391.
- Goldstein, D. E., Little, R. R., Lorenz, R. A., Malone, J. I., Nathan, D., Peterson, C. M., & Sacks, D. B. (2004). Tests of glycemia in diabetes. *Diabetes care*, 27(7), 1761–1773.
- Graffelman J., Moreno V. (2013). The mid p-value in exact tests for Hardy-Weinberg equilibrium. *Stat. Appl. Genet. Mol. Biol.* 12, 433–448.
- Grarup, N., Stender-Petersen, K. L., Andersson, E. A., Jørgensen, T., Borch-Johnsen, K., Sandbaek, A., et al. (2008). Association of variants in the sterol regulatory element-binding factor 1 (SREBF1) gene with type 2 diabetes, glycemia, and insulin resistance: a study of 15,734 Danish subjects. *Diabetes*, 57(4), 1136–1142.
- Griffiths, B., Lewis, C. A., Bensaad, K., Ros, S., Zhang, Q., Ferber, E. C., et al. (2013). Sterol regulatory element binding protein-dependent regulation of lipid synthesis supports cell survival and tumor growth. *Cancer Metab*, 1(1), 3.

- Guo, D., Bell, E. H., Mischel, P., & Chakravarti, A. (2014). Targeting SREBP-1-driven lipid metabolism to treat cancer. *Curr Pharm Des*, 20(15), 2619–2626.
- Hammer, M., Storey, S., Hershey, D. S., Brady, V. J., Davis, E., Mandolfo, N., et al. (2019). Hyperglycemia and Cancer: A State-of-the-Science Review. *Oncol Nurs Forum*, 46(4), 459–472.
- Harbuwono, D. S., Pramono, L. A., Yunir, E., & Subekti, I. (2018). Obesity and central obesity in Indonesia: evidence from a national health survey. *MJI*, 27(2), 114–20.
- Hayden, M. S., & Ghosh, S. (2008). Shared principles in NF-kappaB signaling. *Cell*, 132(3), 344–362.
- Heit, J. A., Leibson, C. L., Ashrani, A. A., Pettersson, T. M., Bailey, K. R., & Melton, L. J., 3rd (2009). Is diabetes mellitus an independent risk factor for venous thromboembolism?: a population-based case-control study. *Arterioscler Thromb Vasc Biol*, 29(9), 1399–1405.
- Himanshu, D., Ali, W., & Wamique, M. (2020). Type 2 diabetes mellitus: pathogenesis and genetic diagnosis. *J Diabetes Metab Disord*, 19(2), 1959–1966.
- Hirosumi, J., Tuncman, G., Chang, L., Görgün, C. Z., Uysal, K. T., Maeda, K. (2002). A central role for JNK in obesity and insulin resistance. *Nature*, 420(6913), 333–336.
- Hirvonen, J., Virtanen, K. A., Nummenmaa, L., Hannukainen, J. C., Honka, M. J., Bucci, M., et al. (2011). Effects of insulin on brain glucose metabolism in impaired glucose tolerance. *Diabetes*, 60(2), 443–447.
- Horton, J. D., Goldstein, J. L., & Brown, M. S. (2002). SREBPs: activators of the complete program of cholesterol and fatty acid synthesis in the liver. *J Clin Invest*, 109(9), 1125–1131.
- Hotamisligil, G. S., & Erbay, E. (2008). Nutrient sensing and inflammation in metabolic diseases. *Nature reviews. Immunology*, 8(12), 923–934.
- Huang, S., & Czech, M. P. (2007). The GLUT4 glucose transporter. *Cell Metab*, 5(4), 237–252.
- Ide, T., Shimano, H., Yahagi, N., Matsuzaka, T., Nakakuki, M., Yamamoto, T., Nakagawa, Y., Takahashi, A., Suzuki, H., Sone, H., Toyoshima, H., Fukamizu, A., & Yamada, N. (2004). SREBPs suppress IRS-2-mediated insulin signalling in the liver. *Nat. Cell Biol*, 6(4), 351–357.
- Insel, R. A., Dunne, J. L., Atkinson, M. A., Chiang, J. L., Dabelea, D., Gottlieb, P. A., et al. (2015). Staging presymptomatic type 1 diabetes: a scientific statement of JDRF, the Endocrine Society, and the American Diabetes Association. *Diabetes care*, 38(10), 1964–1974.
- International Diabetes Federation. (2022). Diabetes around the world in 2021. Available at: <https://diabetesatlas.org/>. Diakses pada Agustus 2022
- Jeon, T. I., & Osborne, T. F. (2012). SREBPs: metabolic integrators in physiology and metabolism. *Trends Endocrinol Metab: TEM*, 23(2), 65–72.

- Jin, X., Zeng, F., Zhang, N., Huang, T., Meng, Q., & Liu, Y. (2012). Association of sterol regulatory element-binding transcription factor gene polymorphisms with ischaemic stroke. *Int J Med Res*, 40(1), 157–166.
- Johnson, E. L dan Robert, S. (1991). *Dasar Kromatografi Cair*. Institut Teknologi Bandung, Bandung.
- Jongberg, S., Carlsen, C. U., & Skibsted, L. H. (2009). Peptides as antioxidants and carbonyl quenchers in biological model systems. *Free Radic Res*, 43(10), 932–942.
- Kahn, S. E., Hull, R. L., & Utzschneider, K. M. (2006). Mechanisms linking obesity to insulin resistance and type 2 diabetes. *Nature*, 444(7121), 840–846.
- Kemenkes RI, 2016. Rencana aksi nasional kesehatan lanjut usia tahun 2016-2019. http://hukor.kemkes.go.id/uploads/produk_hukum/PMK_No._25_ttg_Rencana_Aksi_Nasional_Kesehatan_Lanjut_Usia_Tahun_2016-2019.pdf. Diakses tanggal 9 April 2023.
- Kewalramani, G., Bilan, P. J., & Klip, A. (2010). Muscle insulin resistance: assault by lipids, cytokines and local macrophages. *Curr Opin Clin Nutr Metab Care*, 13(4), 382–390.
- Khan, H. A., Sobki, S. H., & Khan, S. A. (2007). Association between glycaemic control and serum lipids profile in type 2 diabetic patients: HbA1c predicts dyslipidaemia. *Clin. Exp. Med.*, 7(1), 24–29.
- Kim, J. K., Kim, Y. J., Fillmore, J. J., Chen, Y., Moore, I., Lee, J., et al. (2001). Prevention of fat-induced insulin resistance by salicylate. *J Clin Invest*, 108(3), 437–446.
- Kim, H. J., Higashimori, T., Park, S. Y., Choi, H., Dong, J., Kim, Y. J. (2004). Differential effects of interleukin-6 and -10 on skeletal muscle and liver insulin action in vivo. *Diabetes*, 53(4), 1060–1067.
- King, P., Peacock, I., & Donnelly, R. (1999). The UK prospective diabetes study (UKPDS): clinical and therapeutic implications for type 2 diabetes. *Br. J. Clin. Pharmacol*, 48(5), 643–648.
- Kopp, E., & Ghosh, S. (1994). Inhibition of NF-kappa B by sodium salicylate and aspirin. *N Y Sci J*, 265(5174), 956–959.
- Kraegen, E. W., Sowden, J. A., Halstead, M. B., Clark, P. W., Rodnick, K. J., Chisholm, D. J. (1993). Glucose transporters and in vivo glucose uptake in skeletal and cardiac muscle: fasting, insulin stimulation and immunoisolation studies of GLUT1 and GLUT4. *Biochem J*, 295 (Pt 1), 287–293.
- Lean, M. E., Leslie, W. S., Barnes, A. C., Brosnahan, N., Thom, G., McCombie, L., et al. (2018). Primary care-led weight management for remission of type 2 diabetes (DiRECT): an open-label, cluster-randomised trial. *Lancet (London, England)*, 391(10120), 541–551.
- Lebrun, P., & Van Obberghen, E. (2008). SOCS proteins causing trouble in insulin action. *Acta Physiol*, 192(1), 29–36.

- Lee, J. H., Jeon, Y. G., Lee, K. H., Lee, H. W., Park, J., Jang, H., et al. (2017). RNF20 Suppresses Tumorigenesis by Inhibiting the SREBP1c-PTTG1 Axis in Kidney Cancer. *Mol Cell Biol*, 37(22), e00265-17.
- Lehninger, A. L., & Nelson, D. L. (2010). *Lehninger principles of biochemistry* (4th ed.). Academic Internet Publishers.
- Li, L., Yun, J. H., Ryoo, J. E., Lee, K. J., Choi, B. C., & Baek, K. H. (2015). 54G/C polymorphism of SREBF-1 gene is associated with polycystic ovary syndrome. *Eur J Obstet Gynecol Reprod Biol*, 188, 95–99.
- Liang, G., Yang, J., Horton, J. D., Hammer, R. E., Goldstein, J. L., & Brown, M. S. (2002). Diminished hepatic response to fasting/refeeding and liver X receptor agonists in mice with selective deficiency of sterol regulatory element-binding protein-1c. *J Biol Chem*, 277(11), 9520–9528.
- Liu, J. X., Liu, J., Li, P. Q., Xie, X. D., Guo, Q., Tian, L. M., et al. (2008). Association of sterol regulatory element-binding protein-1c gene polymorphism with type 2 diabetes melitus, insulin resistance and blood lipid levels in Chinese population. *J Diabetes Res*, 82(1), 42–47.
- Liu, J. X., Liu, J., Guo, Q., & Liu, J. (2012). Association of sterol regulatory element binding protein-1c genetic polymorphisms rs2297508 and rs11868035 with type 2 diabetes melitus in Gansu Han and Dongxiang population. *Chin Med J*, 29(3), 328–333.
- Lyssenko, V., Jonsson, A., Almgren, P., Pulizzi, N., Isomaa, B., Tuomi, T, et al. (2008). Clinical risk factors, DNA variants, and the development of type 2 diabetes. *N Engl J Med*, 359(21), 2220–2232.
- Ma, X., Zhao, T., Yan, H., Guo, K., Liu, Z., Wei, L., et al. (2021). Fatostatin reverses progesterone resistance by inhibiting the SREBP1-NF-κB pathway in endometrial carcinoma. *Cell Death Dis*, 12(6), 544.
- Mahmud, F. R., Sudirman, Afni, N. (2018). Faktor-Faktor yang Berhubungan dengan Penyakit Diabetes Melitus di Ruang Poli Interna RSUD Mokopido Kabupaten Toli-Toli. *J-Kesmas*, 1(1), 168-175
- Majithia, A. R., & Florez, J. C. (2009). Clinical translation of genetic predictors for type 2 diabetes. *Curr Opin Endocrinol Diabetes Obes*, 16(2), 100–106.
- Makris, K., & Spanou, L. (2011). Is there a relationship between mean blood glucose and glycated hemoglobin?. *JDST*, 5(6), 1572–1583.
- Malaisse WJ. (1997). *Insulin biosynthesis and secretion in vitro*. In: Alberti KGMM, Zimmet P, DeFronzo RA & Keen H (Hon) editors. International Textbook of Diabetes Melitus (2nd ed) John Wiley & Sons. New York. p. 315–36
- McCarthy M. I. (2010). Genomics, type 2 diabetes, and obesity. *N Engl J Med*, 363(24), 2339–2350.
- Meyer, C., Stumvoll, M., Nadkarni, V., Dostou, J., Mitrakou, A., & Gerich, J. (1998). Abnormal renal and hepatic glucose metabolism in type 2 diabetes mellitus. *J Clin Investig*, 102(3), 619–624.

- Mignone, F., & Pesole, G. (2018). mRNA Untranslated Regions (UTRs). *ELS*, 1–6. Available at: <https://doi.org/10.1002/9780470015902.a0005009.pub3>
- Monnier, L., & Colette, C. (2008). Glycemic variability: should we and can we prevent it?. *Diabetes care*, 31 Suppl 2, S150–S154.
- Moon, Y.A. (2017). The SCAP/SREBP Pathway: A Mediator of Hepatic Steatosis. *Endocrinol Metab*, 32, 6 - 10.
- Murni, I.K., Sulistyoningrum, D.C., Susilowati, R., Julia, M. and Dickinson, K.M. (2022). The association between dietary intake and cardiometabolic risk factors among obese adolescents in Indonesia. *BMC Pediatr*, 22(1).
- Nagata, R., Nishio, Y., Sekine, O., Nagai, Y., Maeno, Y., Ugi, S., Maegawa, H., & Kashiwagi, A. (2004). Single nucleotide polymorphism (-468 Gly to A) at the promoter region of SREBP-1c associates with genetic defect of fructose-induced hepatic lipogenesis [corrected]. *JBC*, 279(28), 29031–29042.
- Nauck, M. A., Baller, B., & Meier, J. J. (2004). Gastric inhibitory polypeptide and glucagon-like peptide-1 in the pathogenesis of type 2 diabetes. *Diabetes*, 53 Suppl 3, S190–S196.
- Ndisang, J. F., Rastogi, S., & Vannacci, A. (2014). Insulin resistance, type 1 and type 2 diabetes, and related complications: current status and future perspective. *J Diabetes Res*, 2014, 276475.
- Nigam, S., & Schewe, T. (2000). Phospholipase A(2)s and lipid peroxidation. *Biochim Biophys Acta Bioenerg*, 1488(1-2), 167–181.
- Nohturfft, A., Brown, M. S., & Goldstein, J. L. (1998). Topology of SREBP Cleavage-activating Protein, a Polytopic Membrane Protein with a Sterol-sensing Domain. *J Biol Chem*, 273(27), 17243–17250.
- Ozougwu, J.C., Obimba, K.C., Belonwu, C.D. and Unakalamba., C.B. (2013). the pathogenesis and pathophysiology of type 1 and type 2 diabetes melitus. *J Physio Patho*, 4(4), 26-36
- Pagotto U. (2009). Where does insulin resistance start? The brain. *Diabetes care*, 32 Suppl 2(Suppl 2), S174–S177.
- Parola, M., Bellomo, G., Robino, G., Barrera, G., & Dianzani, M. U. (1999). 4-Hydroxynonenal as a biological signal: molecular basis and pathophysiological implications. *Antioxid Redox Sign*, 1(3), 255–284.
- Pearson, T., Wattis, J. A., King, J. R., MacDonald, I. A., & Mazzatti, D. J. (2016). The Effects of Insulin Resistance on Individual Tissues: An Application of a Mathematical Model of Metabolism in Humans. *Bull Math Biol*, 78(6), 1189–1217.
- Peng, X. E., Chen, F. L., Liu, W., Hu, Z., & Lin, X. (2016). Lack of association between SREBP-1c gene polymorphisms and risk of non-alcoholic fatty liver disease in a Chinese Han population. *Sci Rep*, 6, 32110.
- Petersen, K. F., & Shulman, G. I. (2006). Etiology of insulin resistance. *Am J Med*, 119(5 Suppl 1), S10–S16.

- Petersen, M. C., & Shulman, G. I. (2018). Mechanisms of Insulin Action and Insulin Resistance. *Physiol Rev*, 98(4), 2133–2223.
- Petrie, J. R., Guzik, T. J., & Touyz, R. M. (2018). Diabetes, Hypertension, and Cardiovascular Disease: Clinical Insights and Vascular Mechanisms. *CJC*, 34(5), 575–584.
- Pickering, B. M., & Willis, A. E. (2005). The implications of structured 5' untranslated regions on translation and disease. *Semin Cell Dev Biol*, 16(1), 39–47.
- Qin, S., & Rodrigues, G. A. (2010). Differential roles of AMPK α 1 and AMPK α 2 in regulating 4-HNE-induced RPE cell death and permeability. *Exp Eye Res*, 91(6), 818–824.
- Reaven G. (2003). Insulin resistance, hypertension, and coronary heart disease. *J. Clin. Hypertens. (Greenwich, Conn.)*, 5(4), 269–274.
- Riset Kesehatan Dasar (Riskesdas). (2018). Hasil Utama Riskesdas Tentang Prevalensi Diabetes Melitus di Indonesia 2018. Available at: <https://dinkes.kalbarprov.go.id/wp-content/uploads/2019/03/Laporan-Riskesdas-2018-Nasional.pdf>. Diakses pada Juli 2022
- Robinet, P., Védie, B., Chironi, G., Gariépy, J., Simon, A., Moatti, N., et al. (2003). Characterization of polymorphic structure of SREBP-2 gene: role in atherosclerosis. *Atherosclerosis*, 168(2), 381–387.
- Roden, M., & Shulman, G. I. (2019). The integrative biology of type 2 diabetes. *Nature*, 576(7785), 51–60.
- Roth, J. D., Maier, H., Chen, S., & Roland, B. L. (2009). Implications of amylin receptor agonism: integrated neurohormonal mechanisms and therapeutic applications. *Arch Neurol*, 66(3), 306–310.
- Rubbo, H., Parthasarathy, S., Barnes, S., Kirk, M., Kalyanaraman, B., & Freeman, B. A. (1995). Nitric oxide inhibition of lipoxygenase-dependent liposome and low-density lipoprotein oxidation: termination of radical chain propagation reactions and formation of nitrogen-containing oxidized lipid derivatives. *Arch Biochem*, 324(1), 15–25.
- Sachdev, H. P., Osmond, C., Fall, C. H., Lakshmy, R., Ramji, S., Dey Biswas, S. K., et al. (2009). Predicting adult metabolic syndrome from childhood body mass index: follow-up of the New Delhi birth cohort. *Arch Dis Child Lond*, 94(10), 768–774.
- Sastroasmoro, S., Ismael, S. 1995. *Dasar-dasar metodologi penelitian klinis* Edisi1. Binarupa Aksara, Jakarta.
- Sato R. (2010). Sterol metabolism and SREBP activation. *Arch Biochem*, 501(2), 177–181.
- Satoh T. (2014). Molecular mechanisms for the regulation of insulin-stimulated glucose uptake by small guanosine triphosphatases in skeletal muscle and adipocytes. *Int J Mol Sci*, 15(10), 18677–18692.
- Schwartz, S. S., Epstein, S., Corkey, B. E., Grant, S. F., Gavin, J. R. & Aguilar, R. B. (2016). The Time Is Right for a New Classification System for Diabetes:

- Rationale and Implications of the β -Cell-Centric Classification Schema. *Diabetes care*, 39(2), 179–186.
- Selvin, E., Steffes, M. W., Zhu, H., Matsushita, K., Wagenknecht, L., Pankow, J., Coresh, J., & Brancati, F. L. (2010). Glycated hemoglobin, diabetes, and cardiovascular risk in nondiabetic adults. *NEJM*, 362(9), 800–811.
- Sewter, C., Berger, D., Considine, R. V., Medina, G., Rochford, J., Ciaraldi, T., et al. (2002). Human obesity and type 2 diabetes are associated with alterations in SREBP-1 isoform expression that are reproduced ex vivo by tumor necrosis factor- α . *Diabetes*, 51(4), 1035–1041.
- Shah, P., Vella, A., Basu, A., Basu, R., Schwenk, W. F., & Rizza, R. A. (2000). Lack of suppression of glucagon contributes to postprandial hyperglycemia in subjects with type 2 diabetes mellitus. *J Clin Endocr*, 85(11), 4053–4059.
- Shapiro, R., McManus, M. J., Zalut, C., & Bunn, H. F. (1980). Sites of nonenzymatic glycosylation of human hemoglobin A. *JBC*, 255(7), 3120–3127.
- Solis-Herrera C, Triplitt C, Reasner C, et al. (2018). *Classification of Diabetes Mellitus*. In: Feingold KR, Anawalt B, Boyce A, et al., editors. MDText.com, Inc., South Dartmouth (MA)
- Solis-Herrera, C., Triplitt, C., Reasner, C., DeFronzo, R.A. and Cersosimo, E. (2000). Classification of Diabetes Mellitus. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK279119/?report=classic>. Diakses pada September 2022.
- Steen, V. M., Skrede, S., Polushina, T., López, M., Andreassen, O. A., Fernø, J., et al. (2017). Genetic evidence for a role of the SREBP transcription system and lipid biosynthesis in schizophrenia and antipsychotic treatment. *Eur Neuropsychopharmacol*, 27(6), 589–598.
- Stratton, I. M., Adler, A. I., Neil, H. A., Matthews, D. R., Manley, S. E. & Cull, C. A. (2000). Association of glycaemia with macrovascular and microvascular complications of type 2 diabetes (UKPDS 35): prospective observational study. *BMJ (Clinical research ed.)*, 321(7258), 405–412.
- Stumvoll, M., Chintalapudi, U., Perriello, G., Welle, S., Gutierrez, O., & Gerich, J. (1995). Uptake and release of glucose by the human kidney. Postabsorptive rates and responses to epinephrine. *J Clin Invest*, 96(5), 2528–2533.
- Teufel, F., Seiglie, J. A., Geldsetzer, P., Theilmann, M., Marcus, M. E., Ebert, C., et al. (2021). Body-mass index and diabetes risk in 57 low-income and middle-income countries: a cross-sectional study of nationally representative, individual-level data in 685 616 adults. *Lancet (London, England)*, 398(10296), 238–248.
- The World Bank. (2021). Diabetes prevalence (% of population ages 20 to 79). Available at: <https://data.worldbank.org/indicator/SH.STA.DIAB.ZS>. Diakses pada Agustus 2022
- Timper, K., & Brüning, J. C. (2017). Hypothalamic circuits regulating appetite and energy homeostasis: pathways to obesity. *Dis Model Mech*, 10(6), 679–689.

- Uchida K. (1999). Current status of acrolein as a lipid peroxidation product. *Trends Cardiovasc Med*, 9(5), 109–113.
- Unger, R. H., & Zhou, Y. (2001). Lipotoxicity of beta-cells in obesity and in other causes of fatty acid spillover. *Diabetes*, 50(Supplement 1), S118–S121.
- Vague, P., Juhan-Vague, I., Aillaud, M. F., Badier, C., Viard, R., Alessi, M. C., et al. (1986). Correlation between blood fibrinolytic activity, plasminogen activator inhibitor level, plasma insulin level, and relative body weight in normal and obese subjects. *Metab. Clin. Exp*, 35(3), 250–253.
- Vargas-Alarcon, G., Gonzalez-Pacheco, H., Perez-Mendez, O., Posadas-Sanchez, R., Cardoso-Saldaña, G., Ramirez-Bello, J., et al. (2019). SREBF1c and SREBF2 gene polymorphisms are associated with acute coronary syndrome and blood lipid levels in Mexican population. *PloS one*, 14(9), e0222017.
- Villegas-Valverde, C. C., Kokuina, E., & Breff-Fonseca, M. C. (2018). Strengthening National Health Priorities for Diabetes Prevention and Management. *MED Rev*, 20(4), 5.
- Vincent, M. A., Clerk, L. H., Lindner, J. R., Klibanov, A. L., Clark, M. G., Rattigan, S., et al. (2004). Microvascular recruitment is an early insulin effect that regulates skeletal muscle glucose uptake in vivo. *Diabetes*, 53(6), 1418–1423.
- Vlassara, H., & Uribarri, J. (2014). Advanced glycation end products (AGE) and diabetes: cause, effect, or both?. *Curr. Diabetes Rev*. 14(1), 453
- Wang, Z., Emmerich, A., Pillon, N. J., Moore, T., Hemerich, D., & Cornelis, M. C. (2022). Genome-wide association analyses of physical activity and sedentary behavior provide insights into underlying mechanisms and roles in disease prevention. *Nat Genet*, 54(1332–1344), 1–13.
- Weisberg, S. P., McCann, D., Desai, M., Rosenbaum, M., Leibel, R. L., & Ferrante, A. W., Jr (2003). Obesity is associated with macrophage accumulation in adipose tissue. *J Clin Investig*, 112(12), 1796–1808.
- Wentholt, I. M., Kulik, W., Michels, R. P., Hoekstra, J. B., & DeVries, J. H. (2008). Glucose fluctuations and activation of oxidative stress in patients with type 1 diabetes. *Diabetologia*, 51(1), 183–190.
- Wilcox G. (2005). Insulin and insulin resistance. *Clin Biochem Rev*, 26(2), 19–39.
- Wondmkun Y. T. (2020). Obesity, Insulin Resistance, and Type 2 Diabetes: Associations and Therapeutic Implications. *Diabetes Metab. Syndr. Obes.: Targets Therapy*, 13, 3611–3616.
- Yadav, U. C., & Ramana, K. V. (2013). Regulation of NF-κB-induced inflammatory signaling by lipid peroxidation-derived aldehydes. *Oxid Med Cell*, 2013, 690545.
- Yari, Z., Behrouz, V., Zand, H., & Pourvali, K. (2020). New Insight into Diabetes Management: From Glycemic Index to Dietary Insulin Index. *Curr Diabetes Rev*, 16(4), 293–300.
- Yi, M., Li, J., Chen, S., Cai, J., Ban, Y., Peng, Q., et al. (2018). Emerging role of lipid metabolism alterations in Cancer stem cells. *J Exp Clin Cancer Res*, 37(1), 118.

- Yin, M. J., Yamamoto, Y., & Gaynor, R. B. (1998). The anti-inflammatory agents aspirin and salicylate inhibit the activity of I(kappa)B kinase- β . *Nature*, 396(6706), 77–80.
- Yu, C., Chen, Y., Cline, G. W., Zhang, D., Zong, H., Wang, Y. (2002). Mechanism by which fatty acids inhibit insulin activation of insulin receptor substrate-1 (IRS-1)-associated phosphatidylinositol 3-kinase activity in muscle. *J Biol Chem*, 277(52), 50230–50236.
- Yuan, M., Konstantopoulos, N., Lee, J., Hansen, L., Li, Z. W., Karin, M., et al. (2001). Reversal of obesity- and diet-induced insulin resistance with salicylates or targeted disruption of Ikk β . *N Y Sci J* 293(5535), 1673–1677.
- Zhang, X., Gregg, E. W., Williamson, D. F., Barker, L. E., Thomas, W., Bullard, K. M., et al. (2010). A1C level and future risk of diabetes: a systematic review. *Diabetes care*, 33(7), 1665–1673.
- Zhang, Z., Gong, R. R., Du, J., Xiao, L. Y., Duan, W., Zhou, X. D., et al. (2011). Associations of the SREBP-1c gene polymorphism with gender-specific changes in serum lipids induced by a high-carbohydrate diet in healthy Chinese youth. *Appl Physiol Nutr Metab*, 36(2), 226–232.