

## DAFTAR PUSTAKA

- Adelita, M., Arto, K. S., & Deliana, M. (2020). Kontrol Metabolik pada Diabetes Melitus Tipe-1. *Fakultas Kedokteran Universitas Sumatera Utara/RS Pendidikan Universitas Sumatera Utara, Medan, Indonesia*, 47(3), 227–232. <http://www.cdkjournal.com/index.php/CDK/article/viewFile/377/175>
- Alatawi, F. S., Faridi, U. A., & Alatawi, M. S. (2018). Effect of treatment with vitamin D plus calcium on oxidative stress in streptozotocin-induced diabetic rats. *Saudi Pharmaceutical Journal*, 26(8), 1208-1213.
- Arfian, N., Muflikhah, K., Soeyono, S. K., Sari, D. C. R., Tranggono, U., Anggorowati, N., & Romi, M. M. (2016). Vitamin D attenuates kidney fibrosis via reducing fibroblast expansion, inflammation, and epithelial cell apoptosis. *Kobe Journal of Medical Sciences*, 62(2).
- Arfian, N., Kusuma, M.H.H., Anggorowati, N., Nugroho, D.B., Jeffilano, A., Suzuki, Y., Ikeda, K. and Emoto, N. (2018). Vitamin D upregulates endothelin-1, ETBR, eNOS mRNA expression and attenuates vascular remodelling and ischemia in kidney fibrosis model in mice. *Physiological research*, 67.
- Artaza, J.N. and Norris, K.C. (2009). Vitamin D reduces the expression of collagen and key profibrotic factors by inducing an antifibrotic phenotype in mesenchymal multipotent cells. *The Journal of endocrinology*, 200(2), 207.
- Asmat, U., Abad, K., & Ismail, K. (2016). Diabetes mellitus and oxidative stress—A concise review. *Saudi Pharmaceutical Journal*, 24(5), 547–553. <https://doi.org/10.1016/j.jsps.2015.03.013>
- Barssotti, L., Abreu, I. C. M. E., Brandão, A. B. P., Albuquerque, R. C. M. F., Ferreira, F. G., Salgado, M. A. C., Dias, D. D. S., De Angelis, K., Yokota, R., Casarini, D. E., Souza, L. B., Taddei, C. R., & Cunha, T. S. (2021). *Saccharomyces boulardii* modulates oxidative stress and renin angiotensin system attenuating diabetes-induced liver injury in mice. *Scientific Reports*, 11(1), 1–13. <https://doi.org/10.1038/s41598-021-88497-w>

- Bhagal, R.K., Stoica, C.M., McGaha, T.L. and Bona, C.A. (2005). Molecular aspects of regulation of collagen gene expression in fibrosis. *Journal of clinical immunology*, 25, 592-603.
- Bierhaus, A., Schiekofer, S., Schwaninger, M., Andrassy, M., Humpert, P.M., Chen, J., Hong, M., Luther, T., Henle, T., Klöting, I. and Morcos, M. (2001). Diabetes-associated sustained activation of the transcription factor nuclear factor- $\kappa$ B. *Diabetes*, 50(12), 2792-2808.
- Buckberg, G. *et al.* (2018). 'What is the heart? anatomy, function, pathophysiology, and misconceptions', *Journal of Cardiovascular Development and Disease*, 5(2), p. 33. doi:10.3390/jcdd5020033.
- Carter, Y. M., Wehrle, C. J., & Mahajan, K. (2022). *Anatomy, Thorax, Heart Anomalous Left Coronary Artery*. In StatPearls. StatPearls Publishing.
- Cavalera, M., Wang, J. and Frangogiannis, N.G. (2014). Obesity, metabolic dysfunction, and cardiac fibrosis: pathophysiological pathways, molecular mechanisms, and therapeutic opportunities. *Translational research*, 164(4), 323-335.
- Chang, A.S., Hathaway, C.K., Smithies, O. and Kakoki, M. (2016). Transforming growth factor- $\beta$ 1 and diabetic nephropathy. *American Journal of Physiology-Renal Physiology*, 310(8), 689-696.
- Chen, W.Y., Hong, J., Gannon, J., Kakkar, R. and Lee, R.T. (2015). Myocardial pressure overload induces systemic inflammation through endothelial cell IL-33. *Proceedings of the National Academy of Sciences*, 112(23), 7249-7254.
- Chikezie, P.C., Ojiako, O.A. and Ogbuji, A.C. (2015). 'Oxidative stress in diabetes mellitus', *International Journal of Biological Chemistry*, 9(3), 92-109. doi:10.3923/ijbc.2015.92.109.
- Cho, N. H. (chair) *et al.* (2017). Eighth Edition. In *IDF Diabetes Atlas*, 8<sup>th</sup> edition. <https://www.idf.org/aboutdiabetes/type-2-diabetes.html>
- Claro da Silva, T. *et al.* (2016). 'Vitamin D 3 transactivates the zinc and manganese transporter SLC30A10 via the vitamin D receptor', *The Journal of Steroid Biochemistry and Molecular Biology*, 163, 77-87. doi:10.1016/j.jsbmb.2016.04.006.
- Costanza, B., Umelo, I. A., Bellier, J., Castronovo, V., & Turtoi, A. (2017). Stromal modulators of TGF- $\beta$  in cancer. *Journal of*

- Clinical Medicine, 6(1), 1–25.  
<https://doi.org/10.3390/jcm6010007>
- De Geest, B. and Mishra, M. (2021). Role of oxidative stress in heart failure: insights from gene transfer studies. *Biomedicines*, 9(11), 1645.
- de la Guía-Galipienso, F. *et al.* (2021). ‘Vitamin D and cardiovascular health’, *Clinical Nutrition*, 40(5), 2946–2957. doi:10.1016/j.clnu.2020.12.025.
- Ding, N. *et al.* (2013). ‘A vitamin D receptor/SMAD genomic circuit gates hepatic fibrotic response’, *Cell*, 153(3), 601–613. doi:10.1016/j.cell.2013.03.028.
- Ebrahimzadeh, F., Farhangi, M.A., Tausi, A.Z., Mahmoudinezhad, M., Mesgari-Abbasi, M. and Jafarzadeh, F. (2022). Vitamin D supplementation and cardiac tissue inflammation in obese rats. *BMC nutrition*, 8(1), 1-6.
- Elangovan, H., Chahal, S., & Gunton, J. E. (2017). Vitamin D in liver disease: Current evidence and potential directions. *Biochimica et Biophysica Acta - Molecular Basis of Disease*, 1863(4), 907916. <https://doi.org/10.1016/j.bbdis.2017.01.001>
- Elseweidy, M.M. *et al.* (2020). ‘Early myocardial injury biomarkers in diabetic hyperlipidemic rats: Impact of 10-Dehydrogingerdione and Vitamin D3’, *Experimental Biology and Medicine*, 245(15), 1326–1334. doi:10.1177/1535370220943124.
- Fatani, S.H. *et al.* (2016) ‘Lipid peroxidation is associated with poor control of type-2 diabetes mellitus’, *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 10(2). doi:10.1016/j.dsx.2016.01.028.
- Flanagan, S. E., Haapaniemi, E., Russell, M. A., Caswell, R., Allen, L., Franco, E. De, McDonald, T. J., Rajala, H., Ramelius, A., Barton, J., Heiskanen, K., Heiskanen-kosma, T., Kajosaari, M., & Nuala, P. (2015). Europe PMC Funders Group Activating germline mutations in STAT3 cause early-onset multi-organ autoimmune disease. 46(8), 812–814. <https://doi.org/10.1038/ng.3040>. Activating
- Foroughi, M., Maghsoudi, Z. and Askari, G. (2016). The effect of vitamin D supplementation on blood sugar and different indices of insulin resistance in patients with non-alcoholic fatty liver disease (NAFLD). *Iranian journal of nursing and midwifery research*, 21(1), 100.

- Freire, C.M.V., Moura, A.L.M., Barbosa, M.D.M., Machado, L.J.D.C. and Nogueira, A.I. (2007). Left ventricle diastolic dysfunction in diabetes: an update. *Arquivos Brasileiros de Endocrinologia & Metabologia*, 51, 168-175.
- Furman, B.L., (2021). Streptozotocin-induced diabetic models in mice and rats. *Current Protocols*, 1(4), e78.
- Heaney, R. P., Kopecky, S., Maki, K. C., Hathcock, J., MacKay, D., & Wallace, T. C. (2012). A review of calcium supplements and cardiovascular disease risk. *Advances in nutrition*, 3(6), 763-771.
- Huynh, K., McMullen, J.R., Julius, T.L., Tan, J.W., Love, J.E., Cemerlang, N., Kiriazis, H., Du, X.J. and Ritchie, R.H. (2010). Cardiac-specific IGF-1 receptor transgenic expression protects against cardiac fibrosis and diastolic dysfunction in a mouse model of diabetic cardiomyopathy. *Diabetes*, 59(6), 1512-1520.
- Jackson, S. J., Andrews, N., Ball, D., Bellantuono, I., Gray, J., Hachoumi, L., Holmes, A., Latcham, J., Petrie, A., Potter, P., Rice, A., Ritchie, A., Stewart, M., Strepka, C., Yeoman, M., & Chapman, K. (2017). Does age matter? The impact of rodent age on study outcomes. *Laboratory Animals*, 51(2), 160– 169. <https://doi.org/10.1177/0023677216653984>
- Junqueira, L.C.U., Cossermelli, W.A. and Brentani, R. (1978). Differential staining of collagens type I, II and III by Sirius Red and polarization microscopy. *Archivum histologicum japonicum*, 41(3), 267-274.
- Karsdal, M. (2019). *'Biochemistry of collagens, laminins and elastin: structure, function and biomarkers.'* Academic Press.
- Keane, J. T., Elangovan, H., Stokes, R. A., & Gunton, J. E. (2018). Vitamin D and the liver—correlation or cause? *Nutrients*, 10(4), 1–19. <https://doi.org/10.3390/nu10040496>
- Kuchmerovska, T. *et al.* (2021). 'The *parp-1* and *bax* genes as potential targets for treatment of the heart functioning impairments induced by type 1 diabetes mellitus', *Endocrine Regulations*, 55(2), 61–71. doi:10.2478/enr-2021-0008.
- Lai, C. C., Juang, W. C., Sun, G. C., Tseng, Y. K., Jhong, R. C., Tseng, C. J., Wong, T. Y., & Cheng, P. W. (2020). Vitamin D Attenuates Loss of Endothelial Biomarker Expression in Cardio-Endothelial Cells. *International journal of molecular sciences*, 21(6), 2196. <https://doi.org/10.3390/ijms21062196>

- Lailatul Fitria, N., Lyrawati, D., & Handaru, M. (2015). Efek Pemberian Asam Alfa Lipoat terhadap Kadar MDA dan Gambaran Histologi pada Hati Tikus Wistar Jantan dengan Diabetes Melitus Tipe 1. *Jurnal Kedokteran Brawijaya*, 28(3), 170–176. <https://doi.org/10.21776/ub.jkb.2015.028.03.2>
- Lichtman, M. K., Otero-Vinas, M., & Falanga, V. (2016). Transforming growth factor beta (TGF- $\beta$ ) isoforms in wound healing and fibrosis. *Wound Repair and Regeneration*, 24(2), 215–222. <https://doi.org/10.1111/wrr.12398>
- Liu, R. M., & Desai, L. P. (2015). Reciprocal regulation of TGF- $\beta$  and reactive oxygen species: A perverse cycle for fibrosis. *Redox Biology*, 6, 565–577. <https://doi.org/10.1016/j.redox.2015.09.009>
- Lips, P., Eekhoff, M., van Schoor, N., Oosterwerff, M., de Jongh, R., Krul-Poel, Y. and Simsek, S., (2017). Vitamin D and type 2 diabetes. *The Journal of steroid biochemistry and molecular biology*, 173, 280-285.
- López De Padilla, C.M. *et al.* (2021). ‘Picrosirius Red Staining: Revisiting its application to the qualitative and quantitative assessment of collagen type I and type III in tendon’, *Journal of Histochemistry & Cytochemistry*, 69(10), 633–643. doi:10.1369/00221554211046777.
- Mazzone, G. *et al.* (2018). ‘Dietary supplementation of vitamin D prevents the development of western diet-induced metabolic, hepatic and cardiovascular abnormalities in rats’, *United European Gastroenterology Journal*, 6(7), 1056–1064. doi:10.1177/2050640618774140.
- Meredith, A., Boroomand, S., Carthy, J., Luo, Z. and McManus, B. (2015). 1, 25 Dihydroxyvitamin D<sub>3</sub> inhibits TGF $\beta$ 1-mediated primary human cardiac myofibroblast activation. *PLoS One*, 10(6), e0128655.
- Murtaza, G., Virk, H.U.H., Khalid, M., Lavie, C.J., Ventura, H., Mukherjee, D., Ramu, V., Bhogal, S., Kumar, G., Shanmugasundaram, M. and Paul, T.K. (2019). Diabetic cardiomyopathy-a comprehensive updated review. *Progress in cardiovascular diseases*, 62(4), 315-326.
- Naomi, R. and Fauzi, M.B. (2020). ‘Cellulose/collagen dressings for diabetic foot ulcer: A review.’ *Pharmaceutics*, 12(9), 881.

- Nugraha, G.C., Arfian, N. and Anggorowati, N. (2022). *Pengaruh vitamin D TERHADAP ekspresi mrna interleukin 6 (IL-6), Sebaran Makrofag (cluster of differentiation 68/CD-68), Dan monocyte chemoattractant protein-1 (MCP-1) pada organ paru tikus model diabetes melitus, Theses and Dissertations Repository*. Available at: <http://etd.repository.ugm.ac.id/penelitian/detail/216442> (Accessed: 15 June 2023).
- Ozougwu, O. (2013). The pathogenesis and pathophysiology of type 1 and type 2 diabetes mellitus. *Journal of Physiology and Pathophysiology*, 4(4), 46–57. <https://doi.org/10.5897/jpap2013.0001>
- Probst, P., Grummich, K., Heger, P., Zschke, S., Knebel, P., Ulrich, A., Büchler, M. W., & Diener, M. K. (2016). Blinding in randomized controlled trials in general and abdominal surgery: Protocol for a systematic review and empirical study. *Systematic Reviews*, 5(1), 1–6. <https://doi.org/10.1186/s13643-016-0226-4>
- Rahimi-Madiseh, M., Malekpour-Tehrani, A., Bahmani, M., & Rafieian-Kopaei, M. (2016). The research and development on the antioxidants in prevention of diabetic complications. *Asian Pacific Journal of Tropical Medicine*, 9(9), 825–831. <https://doi.org/10.1016/j.apjtm.2016.07.001>
- Ramdhani, A. (2022). *Pengaruh vitamin D terhadap kadar alt, Kadar ast, Gambaran MIOFIBROBLAS, iroarea fibrosis, Ekspresi mRNA SOD-1, Dan TGF-  $\beta$ 1 pada hepar tikus model diabetes mellitus, Theses and Dissertations Repository*. Available at: <http://etd.repository.ugm.ac.id/penelitian/detail/216254> (Accessed: 15 June 2023).
- Romero, D., Camara, O., Sachse, F., & Sebastian, R. (2016). Analysis of Microstructure of the Cardiac Conduction System Based on Three-Dimensional Confocal Microscopy. *PloS one*, 11(10), e0164093. <https://doi.org/10.1371/journal.pone.0164093>
- Russo, I., & Frangogiannis, N. G. (2016). Diabetes-associated cardiac fibrosis: Cellular effectors, molecular mechanisms and therapeutic opportunities. *Journal of molecular and cellular cardiology*, 90, 84–93. <https://doi.org/10.1016/j.yjmcc.2015.12.011>

- Saxton, A., Chaudhry, R., & Manna, B. (2022). Anatomy, Thorax, Heart Right Coronary Arteries. In StatPearls. StatPearls Publishing.
- Shab-Bidar, S., Neyestani, T. R., & Djazayeri, A. (2015). The interactive effect of improvement of vitamin D status and VDR FokI variants on oxidative stress in type 2 diabetic subjects: A randomized controlled trial. *European Journal of Clinical Nutrition*, 69(2), 216–222. <https://doi.org/10.1038/ejcn.2014.240>
- Sheehy, E.J., Cunniffe, G.M. and O'Brien, F.J. (2018). 'Collagen-based biomaterials for tissue regeneration and repair', *Peptides and Proteins as Biomaterials for Tissue Regeneration and Repair*, pp. 127–150. doi:10.1016/b978-0-08-100803-4.00005-x.
- Skaaby, T., Husemoen, L. L. N., Borglykke, A., Jørgensen, T. Thuesen, B. H., Pisinger, C., Schmidt, L. E., & Linneberg, A. (2014). Vitamin D status, liver enzymes, and incident liver disease and mortality: A general population study. *Endocrine*, 47(1), 213-220. <https://doi.org/10.1007/s12020-013-0107-8>
- Sureshbabu, A., Muhsin, S. A., & Choi, M. E. (2016). TGF- $\beta$  signaling in the kidney: Profibrotic and protective effects. *American Journal of Physiology - Renal Physiology*, 310(7), 596–606. <https://doi.org/10.1152/ajprenal.00365.2015>
- Tortora, G. D. (2019). Principles of anatomy & physiology (14th.ed.)". In Wiley: Vol. ISBN (Issue 9781118345009).
- Tuleta, I., & Frangogiannis, N. G. (2021). Diabetic fibrosis. *Biochimica et biophysica acta. Molecular basis of disease*, 1867(4), 166044. <https://doi.org/10.1016/j.bbadis.2020.166044>
- van Bilsen, M., Daniels, A., Brouwers, O., Janssen, B.J., Derks, W.J., Brouns, A.E., Munts, C., Schalkwijk, C.G., van der Vusse, G.J. and van Nieuwenhoven, F.A. (2014). Hypertension is a conditional factor for the development of cardiac hypertrophy in type 2 diabetic mice. *PLoS One*, 9(1), e85078.
- Wherrett, D. K., Ho, J., Huot, C., Legault, L., Nakhla, M., & Rosolowsky, E. (2018). Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada: Type 1 Diabetes in Children and Adolescents. *Canadian Journal of Diabetes*, 42(Suppl. 1), 234–246.

- care-providers/2018 Clinical Practice Guidelines/Ch34-Type-1-Diabetes-in-Children-and-Adolescents.pdf
- Williams, R. (chair) *et al.* (2019). IDF Diabetes Atlas 9th. In IDF Diabetes Atlas, 9th edition. [https://diabetesatlas.org/idfawp/resource-files/2019/07/IDF diabetes atlas ninth edition en.pdf](https://diabetesatlas.org/idfawp/resource-files/2019/07/IDF_diabetes_atlas_ninth_edition_en.pdf)
- Wynn, T. (2008). 'Cellular and molecular mechanisms of fibrosis', *The Journal of Pathology*, 214(2), 199–210. doi:10.1002/path.2277.
- Wynn, T.A. and Ramalingam, T.R. (2012). 'Mechanisms of fibrosis: Therapeutic translation for fibrotic disease', *Nature Medicine*, 18(7), 1028–1040. doi:10.1038/nm.2807.
- YM, M. *et al.* (2017). 'Vitamin D and immune system', *Vitamins & Minerals*, 06(01). doi:10.4172/2376-1318.1000151.
- Zeng, X. *et al.* (2017). 'Effects of 1,25-dihydroxyvitamin D3 on pathological changes in rats with diabetic cardiomyopathy', *Lipids in Health and Disease*, 16(1). doi:10.1186/s12944-017-0498-2.
- Zhao, W. *et al.* (2008). 'Oxidative stress mediates cardiac fibrosis by enhancing transforming growth factor-beta1 in hypertensive rats', *Molecular and Cellular Biochemistry*, 317(1–2), 43–50. doi:10.1007/s11010-008-9803-8.