



DAFTAR PUSTAKA

- Abugoukh, T. M., Al Sharaby, A., Elshaikh, A. O., Joda, M., Madni, A., Ahmed, I. *et al.* 2022. Does Vitamin D Have a Role in Diabetes?. *Cureus*, 14(10), pp. 1-6.
- Al-Zahrani, Y. A., A. Sattar, M. A. A., Al-Harthi, S. E., Alkreathy, H. M., 2019. Neuroprotective Effect of Different Doses of Vitamine D3 in Diabetic-Induced Alzheimer Rat Model. *J Pharm Res Int*, 26(2), pp. 1–11.
- American Diabetes Association, 2022. Classification and Diagnosis of Diabetes: Standards of Medical Care in Diabetes—2022. *Diabetes Care*, 45(1), pp. 517–538.
- Anand, K., Dhikav, V., 2012. Hippocampus in health and disease: An overview. *Ann Indian Acad Neurol*, 15(4), pp. 239-246.
- Anjum, I., Jaffery, S. S., Fayyaz, M., Samoo, Z., Anjum, S., 2018. The Role of Vitamin D in Brain Health: A Mini Literature Review. *Cureus*, 10(7), pp. 1-4.
- Arfian, N., Muflikhah, K., Soeyono, S. K., Sari, D. C. R., Tranggono, U., Anggorowati, N. *et al.* 2016. Vitamin D Attenuates Kidney Fibrosis via Reducing Fibroblast Expansion, Inflammation, and Epithelial Cell Apoptosis. *Kobe J Med Sci*, 62(2), pp. E38-E44.
- Artwhol, J., Carbone, L., Flecknell, P., Friedman, D. P., Fajt, V., Sawyer, D. *et al.* 2013. *AVMA Guidelines for the Euthanasia of Animals : 2013 edition*. Schaumburg : American Veterinary Medical Association.
- Asmat, U., Abad, K., Ismail, K., 2016. Diabetes mellitus and oxidative stress—A concise review. *Saudi Pharm J*, 24, pp. 547–553.
- Beckhauser, T. F., Francis-Oliveira, J., De Pasquale, R., 2016. Reactive Oxygen Species: Physiological and Physiopathological Effects on Synaptic Plasticity. *J Exp Neurosci*, 10(1), pp. 23-48.
- Bima, A. I., Mahdi, A. S., al Fayez, F. F., Khawaja, T. M., Abo El-Khair, S. M., Elsamanoudy, A. Z., 2021. Cellular Senescence and Vitamin D Deficiency Play a Role in the Pathogenesis of Obesity-Associated Subclinical Atherosclerosis: Study of the Potential Protective Role of Vitamin D Supplementation. *Cells*, 10(4), pp. 1-14.
- Binjawhar, D. N., Alhazmi, A. T., Bin Jawhar, W. N., Mohammed Saeed, W., Safi, S. Z., 2023. Hyperglycemia-induced oxidative stress and epigenetic regulation of ET-1 gene in endothelial cells. *Front Genet*, 14, pp. 1-9.
- Câmara, A. B., Brandão, I. A., 2021. The relationship between vitamin D deficiency and oxidative stress can be independent of age and gender. *Int J Vitam Nutr Res*, 91(1-2), pp. 108–123.
- Čater, M., Hölter, S. M., 2022. A Pathophysiological Intersection of Diabetes and Alzheimer's Disease. *Int J Mol Sci*, 23(19), pp. 1-21.
- Chauhan, P., Jethwa, K., Rathawa, A., Chauhan, G., Mehra, S., 2021. *The Anatomy of the Hippocampus, in: Cerebral Ischemia*. Brisbane (AU) : Exons Publications.



- Chen, L., Yang, R., Qiao, W., Zhang, W., Chen, J., Mao, L. *et al.* 2019. 1,25-Dihydroxyvitamin D exerts an antiaging role by activation of Nrf2-antioxidant signaling and inactivation of p16/p53-senescence signaling. *Aging Cell*, 18(3), pp. 1-18.
- Chen, L., Zhai, L., Gao, Y., Cui, Z., Yu, L., Zhu, D. *et al.* 2023. Nrf2 affects hydroquinone-induces cell cycle arrest through the p16/pRb signaling pathway and antioxidant enzymes. *Ecotoxicol Environ Saf*, 249, pp. 1-8.
- Choi, M., Lee, C., 2015. Immortalization of Primary Keratinocytes and Its Application to Skin Research. *Biomol Ther (Seoul)*, 23(5), pp. 391–399.
- Cui, X., Eyles, D. W., 2022. Vitamin D and the Central Nervous System: Causative and Preventative Mechanisms in Brain Disorders. *Nutrients*, 14(20), pp. 1-20.
- Dhikav, V., Anand, K., 2012. Hippocampus in health and disease: An overview. *Ann Indian Acad Neurol*, 15(4), pp. 239-246.
- Fantini, C., Corinaldesi, C., Lenzi, A., Migliaccio, S., Crescioli, C., 2023. Vitamin D as a Shield against Aging. *Int J Mol Sci*, 24(5), pp. 1-21.
- Faraci, F.M., Didion, S.P., 2004. Vascular Protection. *Arterioscler Thromb Vasc Biol*, 24(8), pp. 1367–1373.
- Graham, M. L., Janecek, J. L., Kittredge, J. A., Hering, B. J., Schuurman, H.-J., 2011. The streptozotocin-induced diabetic nude mouse model: differences between animals from different sources. *Comp Med*, 61(4), pp. 356–360.
- Guo, F., Yue, H., Wang, L., Ding, C., Wu, L., Wu, Y. *et al.* 2017. Vitamin D supplement ameliorates hippocampal metabolism in diabetic rats. *Biochem Biophys Res Commun*, 490(2), pp. 239–246.
- He, F., Ru, X., Wen, T., 2020. NRF2, a Transcription Factor for Stress Response and Beyond. *Int J Mol Sci*, 21(13), pp. 1-23.
- Herranz, N., Gil, J., 2018. Mechanism and Functions of Cellular Senescence. *J Clin Invest*, 128(4), pp. 1238-1246.
- Ho, N., Sommers, M. S., Lucki, I., 2013. Effects of diabetes on hippocampal neurogenesis: Links to cognition and depression. *Neurosci Biobehav Rev*, 37(8), pp. 1346–1362.
- Hussein, H. M., Elyamany, M. F., Rashed, L. A., Sallam, N. A., 2022. Vitamin D mitigates diabetes-associated metabolic and cognitive dysfunction by modulating gut microbiota and colonic cannabinoid receptor 1. *Eur J Pharm Sci*, 170, pp. 1-14.
- Jenkins, N. C., Liu, T., Cassidy, P., Leachman, S. A., Boucher, K. M., Goodson, A. G. *et al.* 2011. The p16INK4A tumor suppressor regulates cellular oxidative stress. *Oncogene*, 30, pp. 265–274.
- Kamli-Salino, S. E. J., Brown, P. A. J., Haschler, T. N., Liang, L., Feliers, D., Wilson, H. M. *et al.* 2023. Induction of experimental diabetes and diabetic nephropathy using anomer-equilibrated streptozotocin in male C57Bl/6J mice. *Biochem Biophys Res Commun*, 650, pp. 109–116.
- KEMENKES RI, 2020. InfoDATIN Pusat Data dan Informasi Kementerian Kesehatan RI. Jakarta : Kementerian Kesehatan.



- Kharroubi, A. T., 2015. Diabetes mellitus: The epidemic of the century. *World J Diabetes*, 6(6), pp. 850-867.
- Liguori, I., Russo, G., Curcio, F., Bulli, G., Aran, L., Della-Morte, D. et al. 2018. Oxidative stress, aging, and diseases. *Clin Interv Aging*, 13, pp. 757–772.
- Maciejczyk, M., Źebrowska, E., Chabowski, A., 2019. Insulin Resistance and Oxidative Stress in the Brain: What's New?. *Int J Mol Sci*, 20(4), pp. 1-18.
- Magliano DJ, Boyko EJ, Balkau B, Barengo N, Barr E, Basit A. et al. 2021. *IDF Diabetes Atlas*. 10th edition. [ebook] International Diabetes Federation <www.diabetesatlas.org>
- Mao, X., Gu, C., Chen, D., Yu, B., He, J., 2017. Oxidative stress-induced diseases and tea polyphenols. *Oncotarget*, 8(46), pp. 81649–81661.
- Marino, F., Salerno, N., Scalise, M., Salerno, L., Torella, A., Molinaro, C. et al. 2023. Streptozotocin-Induced Type 1 and 2 Diabetes Mellitus Mouse Models Show Different Functional, Cellular and Molecular Patterns of Diabetic Cardiomyopathy. *Int J Mol Sci*, 24(2), pp. 1-22.
- Mokhtari, Z., Hekmatdoost, A., Nourian, M., 2017. Antioxidant efficacy of vitamin D. *J Parathy Dis*, 5(1), pp. 11–16.
- Muriach, M., Flores-Bellver, M., Romero, F. J., Barcia, J. M., 2014. Diabetes and the Brain: Oxidative Stress, Inflammation, and Autophagy. *Oxid Med Cell Longev*, 2014, pp. 1–9.
- Murphy, M.P., 2009. How mitochondria produce reactive oxygen species. *Biochem J*, 417(1), pp. 1–13.
- Muss, H.B., Smitherman, A., Wood, W.A., Nyrop, K., Tuchman, S., Randhawa, P.K. et al. 2020. p16 a biomarker of aging and tolerance for cancer therapy. *Transl Cancer Res*, 9(9), pp. 5732–5742.
- Nadimi, H., Djazayery, A., Javanbakht, M. H., Dehpour, A., Ghaedi, E., Derakhshanian, H. et al. 2020. Effect of Vitamin D supplementation on CREB-TrkB-BDNF pathway in the hippocampus of diabetic rats. *Iran J Basic Med Sci*, 23(1), pp. 117–123.
- Nair, R., Maseeh, A., 2012. Vitamin D: The sunshine vitamin. *J Pharmacol Pharmacother*, 3(2), pp. 118-126.
- Nakashima, A., Yokoyama, K., Yokoo, T., Urashima, M., 2016. Role of vitamin D in diabetes mellitus and chronic kidney disease. *World J Diabetes*, 7(5), pp. 89-100.
- Oktora, S. I., Butar Butar, D., 2022. Determinants of Diabetes Mellitus Prevalence in Indonesia. *KEMAS*, 18(2), pp. 266–273.
- Omidifar, N., Moghadami, M., Mousavi, S. M., Hashemi, S. A., Gholami, A., Shokripour, M. et al. 2021. Trends in Natural Nutrients for Oxidative Stress and Cell Senescence. *Oxid Med Cell Longev*, 2021, pp. 1–7.
- Paulsen, F., Waschke, J., 2011. *Sobotta Atlas of Human Anatomy*. 15th ed. Munich : Elsevier
- Pizzino, G., Irrera, N., Cucinotta, M., Pallio, G., Mannino, F., Arcoraci, V. et al. 2017. Oxidative Stress: Harms and Benefits for Human Health. *Oxid Med Cell Longev*, 2017, pp. 1–13.



- Quincozes-Santos, A., Bobermin, L. D., de Assis, A. M., Gonçalves, C. A., Souza, D. O., 2017. Fluctuations in glucose levels induce glial toxicity with glutamatergic, oxidative and inflammatory implications. *Biochim Biophys Acta Mol Basis Dis*, 1863 (2017), pp. 1–14.
- Sadeghi, A., Hami, J., Razavi, S., Esfandiary, E., Hejazi, Z., 2016. The effect of diabetes mellitus on apoptosis in hippocampus: Cellular and molecular aspects. *Int J Prev Med*, 7(57), pp. 1-9.
- Safwan-Zaiter, H., Wagner, N., Wagner, K.-D., 2022. P16INK4A—More Than a Senescence Marker. *Life*, 12(9), pp. 1-22.
- Saif-Elnasr, M., Ibrahim, I., Alkady, M., 2017. Role of Vitamin D on glycemic control and oxidative stress in type 2 diabetes mellitus. *J Res Med Sci*, 22(1), pp. 1-5.
- Sala, F. A., Wright, G. S. A., Antonyuk, S. V., Garratt, R. C., Hasnain, S. S., 2019. Molecular recognition and maturation of SOD1 by its evolutionarily destabilised cognate chaperone hCCS. *PLOS Biol*, 17(2), pp. 1-22.
- Simanjuntak, E. J., Zulham, Z., 2020. Superoksida Dismutase (SOD) dan Radikal Bebas. *JKF*, 2(2), pp. 124–129.
- Snezhkina, A. V., Kudryavtseva, A. V., Kardymon, O. L., Savvateeva, M. V., Melnikova, N. V., Krasnov, G. S. et al. 2019. ROS Generation and Antioxidant Defense Systems in Normal and Malignant Cells. *Oxid Med Cell Longev*, 2019, pp. 1–17.
- Varesi, A., Chirumbolo, S., Campagnoli, L. I. M., Pierella, E., Piccini, G. B., Carrara, A. et al. 2022. The Role of Antioxidants in the Interplay between Oxidative Stress and Senescence. *Antioxidants*, 11(7), pp. 1-42.
- Volpe, C. M. O., Villar-Delfino, P. H., dos Anjos, P. M. F., Nogueira-Machado, J. A., 2018. Cellular death, reactive oxygen species (ROS) and diabetic complications. *Cell Death Dis*, 9(119), pp. 1-9.
- Wible, C., 2013. Hippocampal Physiology, Structure and Function and the Neuroscience of Schizophrenia: A Unified Account of Declarative Memory Deficits, Working Memory Deficits and Schizophrenic Symptoms. *Behav Sci*, 3(2), pp. 298–315.
- Wimalawansa, S. J., 2019. Vitamin D Deficiency: Effects on Oxidative Stress, Epigenetics, Gene Regulation, and Aging. *Biology*, 8(2), pp. 1-15.
- Wu, J., Atkins, A., Downes, M., Wei, Z., 2023. Vitamin D in Diabetes: Uncovering the Sunshine Hormone's Role in Glucose Metabolism and Beyond. *Nutrients*, 15(8), pp. 1-15.
- Xu, J., Su, X., Burley, S. K., Zheng, X. F. S., 2022. Nuclear SOD1 in Growth Control, Oxidative Stress Response, Amyotrophic Lateral Sclerosis, and Cancer. *Antioxidants*, 11(2), pp. 1-10.
- Yan, L. J., Wu, J., 2015. Streptozotocin-induced type 1 diabetes in rodents as a model for studying mitochondrial mechanisms of diabetic β cell glucotoxicity. *Diabetes Metab Syndr Obes*, 2015 (8), pp. 181-188.
- Yuniartha, R., Arfian, N., Setyaningsih, W. A. W., Kencana, S. M. S., Sari, D. C. R., 2022. Accelerated Senescence and Apoptosis in the Rat Liver during the Progression of Diabetic Complications. *Malays J Med Sci*, 29(6), pp. 46-59



- Younus, H., 2018. Therapeutic potentials of superoxide dismutase. *Int J Health Sci (Qassim)*, 12(3), pp. 88–93.
- Zhang, X., Wu, X., Tang, W., Luo, Y., 2012. Loss of p16Ink4a Function Rescues Cellular Senescence Induced by Telomere Dysfunction. *Int J Mol Sci*, 13(5), pp. 5866–5877.
- Zhong, W., Gu, B., Gu, Y., Groome, L. J., Sun, J., Wang, Y., 2014. Activation of vitamin D receptor promotes VEGF and CuZn-SOD expression in endothelial cells. *J Steroid Biochem Mol Biol*, 140(2014), pp. 56–62.