DAFTAR PUSTAKA

Abmayr, S.M., & Pavlath, G.K. (2012). Myoblast fusion: lessons from flies and mice. *Development* 139 : 641–656.

Al Dubayee, M., Alshahrani, A., Aljada, D., Zahra, M., Alotaibi, A., Ababtain, I., *et al.* (2021). Gene Expression Profiling of Apoptotic Proteins in Circulating Peripheral Blood Mononuclear Cells in Type II Diabetes Mellitus and Modulation by Metformin. *Diabetes Metab. Syndr. Obes. Targets Ther.* Volume 14 : 1129–1139.

Althunibat, O.Y., Al Hroob, A.M., Abukhalil, M.H., Germoush, M.O., Bin-Jumah, M., & Mahmoud, A.M. (2019). Fisetin ameliorates oxidative stress, inflammation and apoptosis in diabetic cardiomyopathy. *Life Sci.* 221 : 83–92.

Badu-Mensah, A., Valinski, P., Parsaud, H., Hickman, J.J., & Guo, X. (2022a). Hyperglycemia Negatively Affects IPSC-Derived Myoblast Proliferation and Skeletal Muscle Regeneration and Function. *Cells* 11 : 3674.

Badu-Mensah, A., Valinski, P., Parsaud, H., Hickman, J.J., & Guo, X. (2022b). Hyperglycemia Negatively Affects IPSC-Derived Myoblast Proliferation and Skeletal Muscle Regeneration and Function. *Cells* 11 : 3674.

Battistelli, M., & Falcieri, E. (2020). Apoptotic Bodies: Particular Extracellular Vesicles Involved in Intercellular Communication. *Biology* 9 : 21.

Ben, Y., Hao, J., Zhang, Z., Xiong, Y., Zhang, C., Chang, Y., *et al.* (2021). Astragaloside IV inhibits mitochondrial-dependent apoptosis of the dorsal root ganglion in diabetic peripheral neuropathy rats through modulation of the SIRT1/p53 signaling pathway. *Diabetes Metab. Syndr. Obes.* 1647–1661.

Bock, F.J., & Tait, S.W.G. (2020). Mitochondria as multifaceted regulators of cell death. *Nat. Rev. Mol. Cell Biol.* 21 : 85–100.

Burgos-Morón, Abad-Jiménez, Marañón, Iannantuoni, Escribano-López, López-Domènech, *et al.* (2019). Relationship Between Oxidative Stress, ER Stress, and Inflammation in Type 2 Diabetes: The Battle Continues. *J. Clin. Med.* 8 : 1385.

Cai, L., Li, W., Wang, G., Guo, L., Jiang, Y., & Kang, Y.J. (2002). Hyperglycemia-Induced Apoptosis in Mouse Myocardium. *Diabetes* 51 : 1938–1948.

Cavalcante, G.C., Schaan, A.P., Cabral, G.F., Santana-da-Silva, M.N., Pinto, P., Vidal, A.F., *et al.* (2019). A Cell's Fate: An Overview of the Molecular Biology and Genetics of Apoptosis. *Int. J. Mol. Sci.* 20 : 4133.

Chadt, A., & Al-Hasani, H. (2020a). Glucose transporters in adipose tissue, liver, and skeletal muscle in metabolic health and disease. *Pflüg. Arch. - Eur. J. Physiol.* 472 : 1273–1298.

Chadt, A., & Al-Hasani, H. (2020b). Glucose transporters in adipose tissue, liver, and skeletal muscle in metabolic health and disease. *Pflüg. Arch. - Eur. J. Physiol.* 472 : 1273–1298.

Chen, Y., Hua, Y., Li, X., Arslan, I.M., Zhang, W., & Meng, G. (2020). Distinct Types of Cell Death and the Implication in Diabetic Cardiomyopathy. *Front. Pharmacol.* 11 : 42.

Choi, Y.H. (2021). Trans-cinnamaldehyde protects C2C12 myoblasts from DNA damage, mitochondrial dysfunction and apoptosis caused by oxidative stress through inhibiting ROS production. *Genes Genomics* 43 : 303–312.

Chung, S.M., Moon, J.S., & Chang, M.C. (2021). Prevalence of Sarcopenia and Its Association With Diabetes: A Meta-Analysis of Community-Dwelling Asian Population. *Front. Med.* 8 : 681232.

Cosentino, K., & García-Sáez, A.J. (2017). Bax and Bak Pores: Are We Closing the Circle? *Trends Cell Biol.* 27 : 266–275.

Czabotar, P.E., Lessene, G., Strasser, A., & Adams, J.M. (2014). Control of apoptosis by the BCL-2 protein family: implications for physiology and therapy. *Nat. Rev. Mol. Cell Biol.* 15 : 49–63.

Dadsena, S., Jenner, A., & García-Sáez, A.J. (2021). Mitochondrial outer membrane permeabilization at the single molecule level. *Cell. Mol. Life Sci.* 78 : 3777–3790.

D'Arcy, M.S. (2019). Cell death: a review of the major forms of apoptosis, necrosis and autophagy. *Cell Biol. Int.* 43 : 582–592.

Duggan, E.W., Carlson, K., & Umpierrez, G.E. (2017). Perioperative Hyperglycemia Management. *Anesthesiology* 126 : 547–560.

Dumont, N.A., Bentzinger, C.F., Sincennes, M., & Rudnicki, M.A. (2015). Satellite Cells and Skeletal Muscle Regeneration, in: Terjung, R. (Ed.), *Comprehensive Physiology*. pp. 1027–1059, Wiley.

Duranti, G. (2023). Oxidative Stress and Skeletal Muscle Function. *Int. J. Mol. Sci.* 24 : 10227.

Evans, P.L., McMillin, S.L., Weyrauch, L.A., & Witczak, C.A. (2019). Regulation of Skeletal Muscle Glucose Transport and Glucose Metabolism by Exercise Training. *Nutrients* 11 : 2432.

Fairlie, W.D., Tran, S., & Lee, E.F. (2020). Crosstalk between apoptosis and autophagy signaling pathways, in: *International Review of Cell and Molecular Biology*. pp. 115–158, Elsevier.

Fakhruddin, S., Alanazi, W., & Jackson, K.E. (2017). Diabetes-Induced Reactive Oxygen Species: Mechanism of Their Generation and Role in Renal Injury. *J. Diabetes Res.* 2017 : 1–30.

Flores-Romero, H., Hohorst, L., John, M., Albert, M., King, L.E., Beckmann, L., *et al.* (2022). BCL-2-family protein tBID can act as a BAX-like effector of apoptosis. *EMBO J.* 41 : e108690.

Giri, B., Dey, S., Das, T., Sarkar, M., Banerjee, J., & Dash, S.K. (2018). Chronic hyperglycemia mediated physiological alteration and metabolic distortion leads to organ dysfunction, infection, cancer progression and other pathophysiological consequences: An update on glucose toxicity. *Biomed. Pharmacother.* 107 : 306–328.

Green, D.R. (2022a). The Mitochondrial Pathway of Apoptosis Part II: The BCL-2 Protein Family. *Cold Spring Harb. Perspect. Biol.* 14 : a041046.

Green, D.R. (2022b). Caspase Activation and Inhibition. *Cold Spring Harb. Perspect. Biol.* 14 : a041020.

Guru, A., Issac, P.K., Saraswathi, N.T., Seshadri, V.D., Gabr, G.A., & Arockiaraj, J. (2021). Deteriorating insulin resistance due to WL15 peptide from

cysteine and glycine-rich protein 2 in high glucose-induced rat skeletal muscle L6 cells. *Cell Biol. Int.* 45 : 1698–1709.

Hidayaturrahmah, Budi Santoso, H., Aulia Rahmi, R., & Kartikasari, D. (2020). Blood glucose level of white rats (*Rattus norvegicus*) after giving catfish biscuit (*Pangasius hypothalmus*). *BIO Web Conf.* 20 : 04005.

Hirata, Y., Nomura, K., Senga, Y., Okada, Y., Kobayashi, K., Okamoto, S., *et al.* (2019). Hyperglycemia induces skeletal muscle atrophy via a WWP1/KLF15 axis. *JCI Insight* 4 : e124952.

Hu, S., Chang, Y., Wang, J., Xue, C., Shi, D., Xu, H., *et al.* (2013). Fucosylated chondroitin sulfate from Acaudina molpadioides improves hyperglycemia via activation of PKB/GLUT4 signaling in skeletal muscle of insulin resistant mice. *Food Funct.* 4 : 1639.

Hung, C.-L., Chang, H.-H., Lee, S.W., & Chiang, Y.-W. (2021). Stepwise activation of the pro-apoptotic protein Bid at mitochondrial membranes. *Cell Death Differ.* 28 : 1910–1925.

Hwang, J., & Thurmond, D.C. (2022). Exocytosis Proteins: Typical and Atypical Mechanisms of Action in Skeletal Muscle. *Front. Endocrinol.* 13 : 915509.

Ighodaro, O.M. (2018). Molecular pathways associated with oxidative stress in diabetes mellitus. *Biomed. Pharmacother.* 108 : 656–662.

Iser, B.P.M., Pinheiro, P.C., Malta, D.C., Duncan, B.B., & Schmidt, M.I. (2021). Prevalência de pré-diabetes e hiperglicemia intermediária em adultos e fatores associados, Pesquisa Nacional de Saúde. *Ciênc. Saúde Coletiva* 26 : 531–540.

Jan, R., & Chaudhry, G.-S. (2019a). Understanding Apoptosis and Apoptotic Pathways Targeted Cancer Therapeutics. *Adv. Pharm. Bull.* 9 : 205–218.

Jan, R., & Chaudhry, G.-S. (2019b). Understanding Apoptosis and Apoptotic Pathways Targeted Cancer Therapeutics. *Adv. Pharm. Bull.* 9 : 205–218.

Jeng, P.S., Inoue-Yamauchi, A., Hsieh, J.J., & Cheng, E.H. (2018). BH3-dependent and independent activation of BAX and BAK in mitochondrial apoptosis. *Curr. Opin. Physiol.* 3 : 71–81.

Jiang, Z., Lu, W., Zeng, Q., Li, D., Ding, L., & Wu, J. (2018). High glucose-induced excessive reactive oxygen species promote apoptosis through mitochondrial damage in rat cartilage endplate cells. *J. Orthop. Res.* 36 : 2476–2483.

Kalkavan, H., & Green, D.R. (2018). MOMP, cell suicide as a BCL-2 family business. *Cell Death Differ.* 25 : 46–55.

Kamei, Y., Hatazawa, Y., Uchitomi, R., Yoshimura, R., & Miura, S. (2020). Regulation of Skeletal Muscle Function by Amino Acids. *Nutrients* 12 : 261.

Kashyap, D., Garg, V.K., & Goel, N. (2021). Intrinsic and extrinsic pathways of apoptosis: Role in cancer development and prognosis, in: *Advances in Protein Chemistry and Structural Biology*. pp. 73–120, Elsevier.

Ke, F.S., Holloway, S., Uren, R.T., Wong, A.W., Little, M.H., Kluck, R.M., *et al.* (2022). The BCL -2 family member BID plays a role during embryonic development in addition to its BH3 -only protein function by acting in parallel to BAX , BAK and BOK. *EMBO J.* 41 : e110300.

Kesavardhana, S., Malireddi, R.K.S., & Kanneganti, T.-D. (2020). Caspases in Cell Death, Inflammation, and Pyroptosis. *Annu. Rev. Immunol.* 38 : 567–595.

Khalid, M., Petroianu, G., & Adem, A. (2022). Advanced Glycation End Products and Diabetes Mellitus: Mechanisms and Perspectives. *Biomolecules* 12 : 542.

Koobotse, M.O., Schmidt, D., Holly, J.M.P., & Perks, C.M. (2020). Glucose Concentration in Cell Culture Medium Influences the BRCA1-Mediated Regulation of the Lipogenic Action of IGF-I in Breast Cancer Cells. *Int. J. Mol. Sci.* 21 : 8674.

Lee, H., & Lim, Y. (2018). Tocotrienol-rich fraction supplementation reduces hyperglycemia-induced skeletal muscle damage through regulation of insulin signaling and oxidative stress in type 2 diabetic mice. *J. Nutr. Biochem.* 57 : 77–85.

Lee, Y.-S., Kalimuthu, K., Park, Y.S., Luo, X., Choudry, M.H.A., Bartlett, D.L., *et al.* (2020). BAX-dependent mitochondrial pathway mediates the crosstalk between ferroptosis and apoptosis. *Apoptosis* 25 : 625–631.

Lehka, L., & Rędowicz, M.J. (2020a). Mechanisms regulating myoblast fusion: A multilevel interplay. *Semin. Cell Dev. Biol.* 104 : 81–92.

Lehka, L., & Rędowicz, M.J. (2020b). Mechanisms regulating myoblast fusion: A multilevel interplay. *Semin. Cell Dev. Biol.* 104 : 81–92.

Lian, D., Chen, M.-M., Wu, H., Deng, S., & Hu, X. (2022). The Role of Oxidative Stress in Skeletal Muscle Myogenesis and Muscle Disease. *Antioxidants* 11 : 755.

Lim, C., Zhen, A.X., Ok, S., Fernando, P.D.S.M., Herath, H.M.U.L., Piao, M.J., *et al.* (2022). Hesperidin Protects SH− SY5Y Neuronal Cells against High Glucose− Induced Apoptosis via Regulation of MAPK Signaling. *Antioxidants* 11 : 1707.

Liu, J., Pan, M., Huang, D., Wu, J., Liu, Y., Guo, Y., *et al.* (2022). High glucose induces apoptosis, glycogen accumulation and suppresses protein synthesis in muscle cells of olive flounder *Paralichthys olivaceus*. *Br. J. Nutr.* 127 : 1601–1612.

Ma, X., Nan, F., Liang, H., Shu, P., Fan, X., Song, X., *et al.* (2022). Excessive intake of sugar: An accomplice of inflammation. *Front. Immunol.* 13 : 988481.

Mandal, R., Barrón, J.C., Kostova, I., Becker, S., & Strebhardt, K. (2020). Caspase-8: The double-edged sword. *Biochim. Biophys. Acta BBA - Rev. Cancer* 1873 : 188357.

Millay, D.P. (2022). Regulation of the myoblast fusion reaction for muscle development, regeneration, and adaptations. *Exp. Cell Res.* 415 : 113134.

Mishra, B., & Jha, R. (2019). Oxidative Stress in the Poultry Gut: Potential Challenges and Interventions. *Front. Vet. Sci.* 6 : 60.

Mizukami, H., & Osonoi, S. (2020). Collateral Glucose-Utlizing Pathwaya in Diabetic Polyneuropathy. *Int. J. Mol. Sci.* 22 : 94.

Mohd Nor, N.A., Budin, S.B., Zainalabidin, S., Jalil, J., Sapian, S., Jubaidi, F.F., *et al.* (2022). The Role of Polyphenol in Modulating Associated Genes in Diabetes-Induced Vascular Disorders. *Int. J. Mol. Sci.* 23 : 6396.

Mukund, K., & Subramaniam, S. (2020a). Skeletal muscle: A review of molecular structure and function, in health and disease. *WIREs Syst. Biol. Med.* 12.

Mukund, K., & Subramaniam, S. (2020b). Skeletal muscle: A review of molecular structure and function, in health and disease. *WIREs Syst. Biol. Med.* 12.

Nagata, S. (2018). Apoptosis and Clearance of Apoptotic Cells. *Annu. Rev. Immunol.* 36 : 489–517.

Nna, V.U., Abu Bakar, A.B., Ahmad, A., Eleazu, C.O., & Mohamed, M. (2019). Oxidative Stress, NF-κB-Mediated Inflammation and Apoptosis in the Testes of Streptozotocin–Induced Diabetic Rats: Combined Protective Effects of Malaysian Propolis and Metformin. *Antioxidants* 8 : 465.

Obeng, E. (2021). Apoptosis (programmed cell death) and its signals - A review. *Braz. J. Biol.* 81 : 1133–1143.

Pataky, M.W., Yu, C.S., Nie, Y., Arias, E.B., Singh, M., Mendias, C.L., *et al.* (2019). Skeletal muscle fiber type-selective effects of acute exercise on insulin-stimulated glucose uptake in insulin-resistant, high-fat-fed rats. *Am. J. Physiol.-Endocrinol. Metab.* 316 : E695–E706.

Peña-Blanco, A., & García-Sáez, A.J. (2018). Bax, Bak and beyond — mitochondrial performance in apoptosis. *FEBS J.* 285 : 416–431.

Perkins, R., Miranda, E., Karstoft, K., Beisswenger, P., Solomon, T., & Haus, J. (2019). Experimental Hyperglycemia Alters Circulating Concentrations and Renal Clearance of Oxidative and Advanced Glycation End Products in Healthy Obese Humans. *Nutrients* 11 : 532.

Rahman, F.A., & Quadrilatero, J. (2023). Mitochondrial Apoptotic Signaling Involvement in Remodeling During Myogenesis and Skeletal Muscle Atrophy. *Semin. Cell Dev. Biol.* 143 : 66–74.

Redza-Dutordoir, M., & Averill-Bates, D.A. (2016). Activation of apoptosis signalling pathways by reactive oxygen species. *Biochim. Biophys. Acta BBA - Mol. Cell Res.* 1863 : 2977–2992.

Rizwan, H., Pal, S., Sabnam, S., & Pal, A. (2020). High glucose augments ROS generation regulates mitochondrial dysfunction and apoptosis via stress signalling cascades in keratinocytes. *Life Sci.* 241 : 117148.

Schmidt, M., Schüler, S.C., Hüttner, S.S., von Eyss, B., & von Maltzahn, J. (2019). Adult stem cells at work: regenerating skeletal muscle. *Cell. Mol. Life Sci.* 76 : 2559–2570.

Scicchitano, B.M., Pelosi, L., Sica, G., & Musarò, A. (2018). The physiopathologic role of oxidative stress in skeletal muscle. *Mech. Ageing Dev.* 170 : 37–44.

Silva Rosa, S.C., Nayak, N., Caymo, A.M., & Gordon, J.W. (2020). Mechanisms of muscle insulin resistance and the cross-talk with liver and adipose tissue. *Physiol. Rep.* 8.

Simbolon, D., Siregar, A., & Talib, R.A. (2020). Prevention and Control of Type 2 Diabetes Mellitus in Indonesia through the Modification of Physiological Factors and Physical Activities. *Kesmas Natl. Public Health J.* 15.

Sinha, S., Elbaz-Alon, Y., & Avinoam, O. (2022). Ca^{2+} as a coordinator of skeletal muscle differentiation, fusion and contraction. *FEBS J.* 289 : 6531–6542.

Sobestiansky, S., Michaelsson, K., & Cederholm, T. (2019). Sarcopenia prevalence and associations with mortality and hospitalisation by various sarcopenia

definitions in 85–89 year old community-dwelling men: a report from the ULSAM study. *BMC Geriatr.* 19 : 318.

Tomita, T. (2016). Apoptosis in pancreatic β-islet cells in Type 2 diabetes. *Bosn. J. Basic Med. Sci.* 16 : 162–179.

Tummers, B., & Green, D.R. (2017). Caspase-8: regulating life and death. *Immunol. Rev.* 277 : 76–89.

Vaughan, M., & Lamia, K.A. (2019). Isolation and Differentiation of Primary Myoblasts from Mouse Skeletal Muscle Explants. *J. Vis. Exp.* 60310.

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.

Voss, A.K., & Strasser, A. (2020). The essentials of developmental apoptosis. *F1000Research* 9 : 148.

Vringer, E., & Tait, S.W.G. (2023). Mitochondria and cell death-associated inflammation. *Cell Death Differ.* 30 : 304–312.

Wang, W., Zhao, H., & Chen, B. (2020). DJ-1 protects retinal pericytes against high glucose-induced oxidative stress through the Nrf2 signaling pathway. *Sci. Rep.* 10 : 2477.

Yan, G., Elbadawi, M., & Efferth, T. (2020). Multiple cell death modalities and their key features (Review). *World Acad. Sci. J.*

Yaribeygi, H., Atkin, S.L., & Sahebkar, A. (2019). A review of the molecular mechanisms of hyperglycemia-induced free radical generation leading to oxidative stress. *J. Cell. Physiol.* 234 : 1300–1312.

Yu, D., Cai, Z., Li, D., Zhang, Y., He, M., Yang, Y., *et al.* (2021). Myogenic Differentiation of Stem Cells for Skeletal Muscle Regeneration. *Stem Cells Int.* 2021 : 1–10.

Yung, J.H.M., & Giacca, A. (2020). Role of c-Jun N-terminal Kinase (JNK) in Obesity and Type 2 Diabetes. *Cells* 9 : 706.

Zaman, S. (2021). Evaluation of BCL-2 and BAX Genes Expression in Hyperglycemia-Induced NIH Cells. *Sci. Inq. Rev.* 5.

Zammit, P.S. (2017). Function of the myogenic regulatory factors Myf5, MyoD, Myogenin and MRF4 in skeletal muscle, satellite cells and regenerative myogenesis. *Semin. Cell Dev. Biol.* 72 : 19–32.

Zhang, H., Qi, G., Wang, K., Yang, J., Shen, Y., Yang, X., *et al.* (2023). Oxidative stress: Roles in skeletal muscle atrophy. *Biochem. Pharmacol.* 214 : 115664.

Zhang, J., Guo, Y., Ge, W., Zhou, X., & Pan, M. (2019). High glucose induces apoptosis of HUVECs in a mitochondria-dependent manner by suppressing hexokinase 2 expression. *Exp. Ther. Med.* 18 : 621–629.

Zhong, amy, Chen, Y., & Chen, Lang, P. (2019). Diabetes-Cancer Risk: Hyperglycemia on DNA Damage and Repair. *Am. J. Biomed. Sci. Res.* 5 : 334–336.

Zhu, L., Hao, J., Cheng, M., Zhang, C., Huo, C., Liu, Y., *et al.* (2018). Hyperglycemia-induced Bcl-2/Bax-mediated apoptosis of Schwann cells via mTORC1/S6K1 inhibition in diabetic peripheral neuropathy. *Exp. Cell Res.* 367 : 186–195.

Zveik, O., Rechtman, A., Haham, N., Adini, I., Canello, T., Lavon, I., *et al.* (2022). Sera of Neuromyelitis Optica Patients Increase BID-Mediated Apoptosis in Astrocytes. *Int. J. Mol. Sci.* 23 : 7117.