



DAFTAR PUSTAKA

- Arias, A., Feijoo, G., & Moreira, M. T. 2022. Exploring the potential of antioxidants from fruits and vegetables strategies for their recovery. *Innovative Food Science and Emerging Technologies*. 77(2022): 102974.
- Baldus, S., Eiserich, J.P., Brennan, M.L., Jackson, R.M., Alexander, C.B. & Freeamn, B.A. 2002. Spatial mapping of pulmonary and vascular nitrotyrosine reveals the pivotal role of myeloperoxidase as a catalyst for tyrosine nitration in inflammatory diseases. *Free Radical Biology Medicine*. 33(7): 1010-1019.
- Billman G. E. 2020. Homeostasis: The Underappreciated and Far Too Often Ignored Central Organizing Principle of Physiology. *Frontiers in physiology*. 11. 200.
- Boonyanuphong P & Tobgay U. Protective Effect of Two Thai Pigmented Rice Cultivars Against H₂O₂-Induced Oxidative Damage In HT-29 Cell Culture. *Food Research*. 2022;6(1):27- 33.
- Bouayed, J., & Bohn, T. 2010. Exogenous antioxidants--Double-edged swords in cellular redox state: Health beneficial effects at physiologic doses versus deleterious effects at high doses. *Oxidative medicine and cellular longevity*. 3(4): 228–237.
- Brauer, E., Lange, T., Keller, D., Görlitz, S., Cho, S., Keye, J., Gossen, M., Petersen, A., & Kornak, U. 2023. Dissecting the influence of cellular senescence on cell mechanics and extracellular matrix formation in vitro. *Aging cell*. 22(3): e13744.
- Brennan, M.L., Wu, W., Fu, X., Shen, Z., Song, W. & Frost, H. 2002. A tale of two controversies: defining both the role of peroxidases in nitrotyrosine formation in vivo using eosinophil peroxidase and myeloperoxidase-deficient mice, and the nature of peroxidase-generated reactive nitrogen species. *Journal of Biological Chemistry*. 277: 17415 – 17427.
- Cai, H. 2005. Hydrogen peroxide regulation of endothelial function: Origins, mechanisms, and consequences. *Cardiovascular Research*. 68(1): 26-36.
- Caidero, J.V & Jacinto, A. 2013. The role of transcription-independent damage signals in the initiation of epithelial wound healing. *Nature Reviews Molecular cell Biology*. 14: 249-262.
- Campisi, J. 2005. Senescent cells, tumor suppression, and organismal aging: good citizens, bad neighbors. *Cell*. 120: 513-522.
- Chandramouli, B., Madhavi Latha, M., Narendra, K., & Mallikarjuna, K. 2018. Phytochemical and Antimicrobial Investigations of Methanolic Seed Extract of Black Rice (*Oryza sativa L.*) Mentioned in an Ancient Palm Leaf Manuscript (Talapatra). *World Journal of Pharmaceutical Research World Journal of Pharmaceutical Research SJIF Impact Factor*. 3:598–616.
- Chidawanyika, T & Supattapone, S. 2021. Hydrogen peroxide-induced cell death in mammalian cells. *Journal of Cellular Signaling*. 2(3): 206-211.
- Christanto, D.R., Mose, J.C., Yuniarti, T., Bestari, M.B., Fauziah, P.N., Purwestri, Y.A., & Munthe, J.N. 2021. Anti-angiogenic Effect of Black Rice Bran (*Oryza sativa L.* ‘Sembada Hitam’) on Soluble Fms-Like Tyrosine Kinase and Placental Growth Factor in Preeclampsia. *Systematic Reviews in Pharmacy*. 12(1): 1594-1597.



- Cooney, L., Loke, Y. K., Golder, S., Kirkham, J., Jorgensen, A., Sinha, I., & Hawcutt, D. 2017. Overview of systematic reviews of therapeutic ranges: methodologies and recommendations for practice. *BMC medical research methodology*. 17(1): 84.
- Di Marzo, N., Chisci, E., & Giovannoni, R. 2018. The Role of Hydrogen Peroxide in Redox-Dependent Signaling: Homeostatic and Pathological Responses in Mammalian Cells. *Cells*. 7(10): 156.
- Dick, M. K., Miao, J. H., & Limaiem, F. 20232. Histology, Fibroblast. In *StatPearls*. StatPearls Publishing.
- Dinas Ketahanan Pangan, Tanaman Pangan dan Hortikultura. 2020. Beras Hitam si ‘ForbiddenRice’ yang Kaya Manfaat untuk Kesehatan.
- Dodig, S., Čepelak, I., & Pavić, I. 2019. Hallmarks of senescence and aging. *Biochimia medica*. 29(3): 030501.
- Fernandes, I. R., Russo, F. B., Pignatari, G. C., Evangelinellis, M. M., Tavolari, S., Muotri, A. R., & Beltrão-Braga, P. C. 2016. Fibroblast sources: Where can we get them?. *Cytotechnology*. 68(2): 223–228.
- Fisher, G. J., Varani, J., & Voorhees, J. J. 2008. Looking older: fibroblast collapse and therapeutic implications. *Archives of dermatology*. 144(5): 666–672.
- Flieger, J., Flieger, W., Baj, J., & Maciejewski, R. 2021. Antioxidants: Classification, Natural Sources, Activity/Capacity Measurements, and Usefulness for the Synthesis of Nanoparticles. *Materials (Basel, Switzerland)*. 14(15): 4135.
- Forman H.J. 2007. Use and abuse of exogenous H₂O₂ in studies of signal transduction. *Free Radical Biology Medicine*. 42(7): 926-932.
- Gerasymchuk, M., Robinson, G. I., Kovalchuk, O., & Kovalchuk, I. 2022. Modeling of the Senescence-Associated Phenotype in Human Skin Fibroblasts. *International journal of molecular sciences*. 23(13): 7124.
- Ghasemzadeh, A., Karbalaii, M.T., Jaafar, H.Z.E. et al. 2018. Phytochemical constituents, antioxidant activity, and antiproliferative properties of black, red, and brown rice bran. *Chemistry Central Journal*. 12(17): 1-13.
- Halliwell, B., Clement, M. V., & Long, L. H. (2000). Hydrogen peroxide in the human body. *FEBS letters*. 486(1): 10–13.
- Hetharia, G. E., Briliannita, A., Astuti, M., & Marsono, Y. 2019. Antioxidant extraction based on black rice (*Oryza Sativa L. Indica*) to prevent free radical. *International Seminar on Chemical Engineering Soehadi Reksowardojo*. 823: 1-6.
- Kumar, N., Murali, R. D. 2020. Black Rice: A Novel Ingredient in Food Processing. *Journal Nutrition Food Sciences*. 10 (2):771.
- Janik-Karpinska, E., Ceremuga, M., Wieckowska, M., Szyposzynska, M., Niemcewicz, M., Synowiec, E., Sliwinski, T., et al. 2022. Direct T-2 Toxicity on Human Skin—Fibroblast Hs68 Cell Line—In Vitro Study. *International Journal of Molecular Sciences*. 23(9):4929.
- Jiang, D., & Rinkevich, Y. 2018. Defining Skin Fibroblastic Cell Types Beyond CD90. *Frontiers in cell and developmental biology*. 6: 133.



UNIVERSITAS
GADJAH MADA

Efek Kuratif Ekstrak Etanolik Bekatul Beras Hitam (*Oryza sativa L.* â€“Sembada Hitamâ€™) terhadap Deposisi Kolagen Fibroblas NIH3T3 yang diinduksi H₂O₂
MATILDA JESSELINE GABRIELA GIOVANNI, Dr. Ardaning Nuriliani, S.Si., M.Kes.

Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>

- Judge, A., & Dodd, M. S. 2020. Metabolism. *Essays in biochemistry*. 64(4): 607–647.
- Kessler, D., Dethlefsen, S., Haase, I., et al. 2001. Fibroblasts in Mechanically Stressed Collagen Lattices Assume a “Synthetic Phenotype”. *The Journal of Biological Chemistry*. 276(39): 36575-36585.
- Kisiel, M. A., & Klar, A. S. 2019. Isolation and Culture of Human Dermal Fibroblasts. *Methods in molecular biology (Clifton, N.J.)*. 1993:71–78.
- Konno, T., Melo, E. P., Chambers, J. E., & Avezov, E. 2021. Intracellular Sources of ROS/H₂O₂ in Health and Neurodegeneration: Spotlight on Endoplasmic Reticulum. *Cells*. 10(2): 233.
- Kristamtini, K., Wiranti, E. W., & Sutarno, S. 2018. Variation of Pigment and Anthocyanin Content of Local Black Rice from Yogyakarta on Two Altitude. *Buletin Plasma Nutfah*, 24(2), 97.
- Lago, J. C., & Puzzi, M. B. 2019. The effect of aging in primary human dermal fibroblasts. *PloS one*. 14(7): e0219165.
- Lee, K.S., Lee, W.S., Suh, S. I., Kim, S. P. Lee, S. R., Ryoo, Y. W., & Kim, B. C. 2003. Melatonin Levels in Human Skin Fibroblast In Culture. *Experimental & Molecular Medicine*. 35 (4): 263-266.
- Li, Y. R., Jia, Z. and Trush, M. 2016. Defining ros in biology and medicine. *ROS*. 1(1): 9-21.
- Ma, H-M., Liu, W., Zhang, P., Yuan, X-Y. 2012. Human Skin Fibroblast Telomeres are Shortened after Ultraviolet Irradiation. *Journal of International Medical Research*. 40(5):1871-1877.
- Martínez Zamudio, Ricardo & Herbig, Utz. 2019. Cell Senescence. *Encyclopedia of Gerontology and Population Aging*. 1-15
- McHugh, D., & Gil, J. 2018. Senescence and aging: Causes, consequences, and therapeutic avenues. *The Journal of cell biology*. 217(1): 65–77.
- Miller, M. A., & Zachary, J. F. (2017). Mechanisms and Morphology of Cellular Injury, Adaptation, and Death. *Pathologic Basis of Veterinary Disease*. 2:43e19.
- Mirończuk-Chodakowska, I., Wikowska, A. M., & Zujko, M. E. 2018. Endogenous non-enzymatic antioxidants in the human body. *Advances in Medical Sciences*. 63(1): 68-78.
- Moko E, Purnomo H, Kusnadi J, Ijong F. 2014. Phytochemical content and antioxidant properties of colored and non colored varieties of rice bran from Minahasa, North Sulawesi, Indonesia. *International Food Research Journal*. 21(3):1017–1023
- Muniroh, A., Budijanto, S., & Priosoeryanto, B. P. 2019. Antioxidant activity and phytochemical analysis from black rice bran. *IOP Conference Series: Earth and Environmental Science*. 335: 012019
- Muñoz-Espín D., & Serrano M. 2014. Cellular senescence: from physiology to pathology. *Nature Reviews Molecular Cell Biology*. 15:482–496.



- Munoz-Espín D., Cañamero M., Maraver A., Gómez-López G., Contreras J., Murillo-Cuesta S., Rodríguez-Baeza A., Varela-Nieto I., Ruberte J., Collado M., & Serrano M. 2013. Programmed cell senescence during mammalian embryonic development. *Cell*. 155:1104–1118.
- National Center for Biotechnology Information. 2023. PubChem Compound Summary for CID784.*Hydrogen Peroxide*.
- Oktavia, G., Purwestri, Y. A., Saragih, H. T. S. G., & Nuriliani, A. 2022. Ethanolic Extract of Black Rice ‘Sembada Hitam’ Bran Protects the Cytotoxic Effect of H₂O₂ on NIH3T3 Cell. *Current Research in Nutrition and Food Science*. 11(1): 389-400
- Ow, Y. P., Green, D. R., Hao, Z., & Mak, T. W. 2008. Cytochrome c: functions beyond respiration. *Nature reviews. Molecular cell biology*. 9(7): 532–542.
- Padilla, C. M. L. D., Coenen, M. J., Tovar, A., et al. 2021. Picosirius Red Staining: Revisiting Its Application to Qualitative and Quantitative Assessment of Collagen Type I and Tye III in Tendon. *Journal of Histochemistry & Cytochemistry*. 69(10): 633-643.
- Park W. H. 2013. H₂O₂ inhibits the growth of human pulmonary fibroblast cells by inducing cell death, GSH depletion and G1 phase arrest. *Molecular medicine reports*. 7(4): 1235–1240.
- Pengkumsri N, Chaiyasut C, Saenjum C, Sirilun S, Peerajan S, Suwannalert P, Sirisattha S, & Sivamaruthi BS. 2015. Physicochemical and antioxidative properties of black, brown and red rice varieties of northern Thailand. *Food Science Technology (Campinas)*. 35(2):331–338.
- Phaniendra, A., Jestadi, D.B. and Periyasamy, L. 2015. Free radicals: properties, sources, targets, and their implication in various diseases. *Indian Journal of Clinical Biochemistry*. 30: 11-26.
- Pieńkowska, N., Bartosz, G., Pichla, M., Grzesik-Pietrasiewicz, M., Gruchala, M., & Sadowska-Bartosz, I. 2020. Effect of antioxidants on the H₂O₂-induced premature senescence of human fibroblasts. *Aging*. 12(2): 1910–1927.
- Poljsak, B., Dahmane, R.G. & Godic, A. 2012. Intrinsic skin aging: the role of oxidative stress. *Acta Dermatovenerol Alp Pannonica Adriat*. 21: 33-36.
- Rahimi, A. M., Cai, M., & Hoyer-Fender, S. 2022. Heterogeneity of the NIH3T3 Fibroblast Cell Line. *Cells*. 11(17): 2677.
- Rochlani, Y., Pothineni, N. V., Kovelamudi, S., & Mehta, J. L. 2017. Metabolic syndrome: pathophysiology, management, and modulation by natural compounds. *Therapeutic advances in cardiovascular disease*. 11(8): 215–225.
- Rukmana, R.M., Soesilo, N.P., Rumiyati., & Pratiwi, R. 2016. The Effect of Ethanolic Extract of Black and White Rice Bran (*Oryza sativa L.*) on Cancer Cells. *Indonesian Journal of Biotechnology*. 21(1): 63-69.
- Seawan N, Vichit W, Thakam A, Thitipramote N, Chaiwut P, Pintathong P & Thitilertdech N. 2014. Antioxidant capacities, phenolic, anthocyanin and proanthocyanidin contents of pigmented rice extracts obtained by microwave-assisted method. *Suranaree Journal of Science and Technology*. 21(4) 301–6.



UNIVERSITAS
GADJAH MADA

Efek Kuratif Ekstrak Etanolik Bekatul Beras Hitam (*Oryza sativa L.* â€“ Sembada Hitamâ€™) terhadap Deposisi Kolagen Fibroblas NIH3T3 yang diinduksi H₂O₂
MATILDA JESSELINE GABRIELA GIOVANNI, Dr. Ardaning Nuriliani, S.Si., M.Kes.

Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>

- Segeritz, C. P., & Vallier, L. (2017). Cell Culture: Growing Cells as Model Systems In Vitro. *Basic Science Methods for Clinical Researchers*. 151–172.
- Sies, H. 2014. Role of metabolic H₂O₂ generation: redox signaling and oxidative stress. *Journal of Biological Chemistry*. 289(13): 8735-8741.
- Sies, H. 2017. Hydrogen peroxide as a central redox signaling molecule in physiological oxidative stress: oxidative eustress. *Redox Biology*. 11: 613-619.
- Tiwari, A. K. 2019. The Antioxidant Paradox. *Pharmacognosy Magazine*. S173-S175.
- Tu, Y and Quan, T. 2016. Oxidative stress and human skin connective tissue aging. *Cosmetics*, 3(3): 1-12.
- Widyaningtias, L.A.M., Yudono, P., & Supriyanta. 2020. Identifikasi Karakter Morfologi dan Agronomi Penentu Kehampaan Malai Padi (*Oryza sativa L.*). *Vegetalika*.9(2): 399-413.
- Yarza, R., Vela, S., Solas, M., & Ramirez, M. J. 2016. c-Jun N-terminal Kinase (JNK) Signaling as a Therapeutic Target for Alzheimer's Disease. *Frontiers in pharmacology*, 6, 321.
- Zimmermann, A., Ruckenstein, C., Kainz, K., Hofer, S., Madeo, F., Carmona-Gutierrez, D., & Kroemer, G. (2017). *Cell Stress* - a new journal for cellular pathophysiology. *Cell stress*, 1(1), 1–3.